

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: Jon Iza <ea2sn@jet.es>

Subject: [12481] 1/2 turn on a toroid

Message-ID: <330B6713.6D7@jet.es>

Gang,

I have enjoyed the thread and Zack's response to the question about how to wind half turn on a toroid. I've seen toroid winding counts on the OUTSIDE of the core (Ham Radio Today, from England)...

Toroids are pesky components and sometimes there are bizarre interpretations of the calculations. My opinion is that the designer was not too familiar with toroids and guesstimated the number of turns rounding to half, as it was common with helicoidal inductors. That also happens in other fields too, and to the opposite:

A fellow from Europe, while working on his PhD in the US (University name withheld ;-)) ordered a plexiglass fishtank on metric. Fellas at the workshop asked him to specify on Inches and, lo and behold, the guy took the calculator and a 10 x 10 x 20 cm fishtank got converted into a 3.9730 x 3.9730 x 7.8740 in. fishtank. I think it has been the most expensive fishtank built at that workshop by precision machinists! (near US\$1000 in the seventies).

Back to the toroids, I will round the number short and wind the turns really tight (which increases inductance ... as far as my experience tells me :-)

Be well.

jon, ea2sn

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: ukii@megsinet.net (ukii)

Subject: [12447] 1/2 turn: my attempt.

Message-ID: <01BC1DD3.ACB9E460@randolph2er1-28.megsinet.net>

Well, not being an authority on anything, I will guess about this 1/2 turn toroid thing...

Seems to me that since toroids have some kinda magnetic field, if you wind 2 turns or so, and have them wind back over the first ones, wouldn't that nullify or cancel some of the first turn's inductance and leave you with what would be the equivalent of a half turn???

Ok, go and correct me, I know this is probably WAY off base...

73 de john

n9ukx

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: SBJohnston@aol.com
Subject: [12468] 120 Radials - why?
Message-ID: <970218235631_1611384767@emout12.mail.aol.com>

Stuart K5KVH wrote, regarding 120 buried radials...

>That is because that is what is done with AM broadcast
>stations, who do NOT use resonant verticals, (Theirs are
>typically shorter than a quarter wave), and therefore really
> need a good RF ground even more than Hams need it.

While it is definitely true that AM broadcast towers are rarely exactly resonant on the frequency of interest, it has been my experience that many AM station verticals (particularly towers that are part of directional arrays) are often right around a quarter-wavelength high . Many others are taller still, up to 5/8 wave tall. It is more rare to find shorter towers. All benefit from radials to return the ground currents.

The two most common broadcast ground system installations I've seen or built: 120 buried radials up to 1/4 wavelength long, plus a 24' x 24' copper screen around the base of the tower

or

120 buried radials up to 1/4 wavelength long, plus 120 more radials 50' long.

Metal fences, tuning houses, etc are also bonded to the ground system using copper strap. In directional antenna systems, the radials from adjacent towers are usually bonded together using strap along the the line where they intersect.

The goal is to increase the ground conductivity as much as possible, particularly close in to the tower. The ground system is definitely *not* resonant.

In spite of all this, papers I've read show better performance per radial from elevated, above-the-soil ground systems, and some stations employ these in varied configurations. That's what I would do if I were to set up a vertical for HF.

73 Steve Johnston WD8DAS

sbjohnston@aol.com

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: Richard Wilkerson <richqrp@cts.com>
Subject: [12451] 38
Message-ID: <330A5F5C.3A4E@cts.com>

Silly Question.

I have seen many problems listed here on the net. It just hit , why? Why are some of us having no trouble and others are not so lucky? Don't ask me why but mine worked right off the bat, STOCK. The only trouble I am now having is the 5 watt mod and I think that's just due to a high SWR. But MR. Chuck (Adams) is taking care of that for me, he has a mod to give some type of SWR protection. So that's my silly question of the day. 73/72's To this great group!!!rich

--

Rich Wilkerson, WD6FDD, Santee, Ca.
ScQRPions

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: kb0rol@juno.com (Bradley L Mugleston)
Subject: [12465] 38 Special
Message-ID: <19970218.214524.4463.3.kb0rol@juno.com>

I have a few questions - my board has locations for two R20 resistors but only one is called for - which location should I use? One location is by the U201 Keyer the other is above the U5 - NE5532 chip.

Also for D7 there are three possible holes to put the two leads - one is just outside the diagram of the diode the other is just inside the diagram?

Thanks,

Brad Mugleston - KB0ROL
Colorado QRP Club # 170, QRP-L #316, ARRL
QTH - Aurora, CO - DM79oq
KB0ROL@JUNO.COM
BMUG@GWL.COM

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Doug Hendricks <ki6ds@dpol.k12.ca.us>
Subject: [12500] 38 Special, Some bad crystals
Message-ID: <1.5.4.16.19970219091518.241701ba@telis.org>

Guys, the second batch of crystals that were used in the second run of 500

kits have a problem. They are marked 22.1184 but they are third overtone crystals, which means that they oscillate at 7.3728 on the fundamental frequency. This will not work in the 38 Special so we must replace them, arrgh!! That means that there are 275 kits out there with a bad crystal. Here is what you need to do. Look in your kit, and at the large crystal. IF it is marked KOYO, then you need a new crystal. Actually, it will say:

KOYO
22.1184MHz
87-35

I take full responsibility for this, I ordered the parts, and even though it says 22.1184, I should have checked a few in the oscillator, which I did not do. There is no reason to make excuses, just make it right. So, please help me. Send me your name, snail mail address, and how many kits you have with bad crystals. I will call Mouser today and get replacement crystals on the way. I should have them by Saturday. There will be about 275 of you. Look at the bright side, I will be getting lots of email. Have a good day.
72, Doug, KI6DS

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: AlK0FRP@aol.com
Subject: [12439] 38s boxes
Message-ID: <970218191010_1514487682@emout04.mail.aol.com>

Gang

Been looking for enclosures for the 38s. ten tec seems to have the best selection. RS doesn't sell ther small box anymore fo resorted to ten tec. The TG-24 measurments look good. 4.275 x 4.125 x 1.961 enough room for board controls and enough height for the final and regulator to be heat sinked to the back panel.

Has anyone tried this size or similar
any other suggestions ???

Al K0FRP CQC #32 ARCI #8601 AKQRP #73

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: ken Cavcey <cavcey@boulder.nist.gov>
Subject: [12527] AE4IC & Crystal Tester
Message-ID: <199702192040.NAA16284@central.blldrdoc.gov>

Dear Bob; You asked if I had measured higher frequency crystals with the

DeMaw circuit. Today I tested a new JAN crystal (3rd overtone) cut for 21.020 MHz.

Even though the sensitivity is a little down at the higher frequencies here is what I got:

$F_o = 21.019880 \text{ MHz}$

$Q_u = 26,300$

$R_s = 17.2 \text{ ohms}$

The signal source I used for the tester is a Fluke/Philips 6071A Synthesized RF source. I have no doubt that the tester will function in the 10 meter band.

Hope the switch problem is cleared up.

73s

Kenneth H. Cavcey W0YOR
Electromagnetic Fields Division
NIST 813.07
CQC #50 QRP-L #1000

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: "KA5T Larry Wise" <lewise@inetport.com>
Subject: [12521] AL for T50-7 ????
Message-ID: <199702192010.0AA29547@admin.inetport.com>

Can anyone give me the value??
Larry

KA5T Larry Wise Georgetown, Texas lewise@inetport.com QRP-L 89 ex K80SG
W6HED W4ZTB

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: "Marshall G. Emm" <mgemm@mtechnologies.com>
Subject: [12438] An Interesting Exercise (longish)
Message-ID: <330A3B9F.1940@mtechnologies.com>

The "4 Anti-Static Wrist Straps for a Dollar" offer has been a VERY interesting exercise (details of the offer are in the

appended re-post below).

A friend of mine (all my friends mentioned herein shall remain nameless) had collected literally thousands of these things where he worked. The techs there ordinarily just throw them out because they work at at ESD compliant work-stations and have no use for these disposables, which come in with every static-sensitive device. My friend hates such obvious waste, but found that the local electronics dump would pay only a couple bucks per thousand for them. That's the supply side of the equation.

I can afford to pay more for them because they are useful give-aways with the "Island" keyer kits, and it's easy enough to offer them at a give-away price because I get to include some product literature which may lead to sales of my kits and software. That's the demand side.

4/\$1 seemed like a pretty fair bargain for you guys, and no hassle for me if you send a green stamp and an SASE. In practice, I've discovered a few complexities that I hadn't really thought of. I'm telling you about them because they have been instructive for me and might be amusing for you-- or instructive if you haven't ordered yours yet[g].

First, it's surprising how much time I've had to spend on e-mail explaining that there are indeed plenty of them and answering other questions. So I've cleaned up the announcement a bit (as you will see below) and hopefully explained everything without the need for "support."

Second, so far, three or four guys have sent checks. I don't ordinarily encourage sending cash through the mail, but a dollar is a minimal risk. The problem with checks is that they have to go through the accounting system and get deposited, so there's more work than the dollar is worth. One guy (NOT a QRP-L member) called me on my 800 number to ask if he could charge a dollar on his credit card! On MY DIME, he got mad at me when I said the minimum I can put on plastic is \$5, besides which there is a transaction charge (25 cents) and a discount (2-3%), so unless he wanted to order \$5 worth....

Third, a couple guys sent HUGE self-addressed envelopes which will weigh more than two ounces once the straps are enclosed. One of them resulted in my having to pay 23 cents postage due just to get it away from the mailman! A standard business envelope (4.25 x 9.5 or whatever) is fine.

One last interesting one was an SASE with a meter impression on it. I expect it will probably go through ok, but technically you can only send metered mail through the post office (or collection box controlled by that post office) where the meter is registered (unless you pay big bucks for a special return-mail permit and set the date to zero).

On the other hand, a lot of you have enclosed nice little notes with your green stamp, and they are much appreciated. As was the guy who told me to donate the dollar to CQC if I was sold out!

Like I said, an interesting exercise!

73

Marshall Emm, AA0XI

aa0xi@mtechnologies.com

<http://www.mtechnologies.com/mthome>

Original posting, subject: Unusual Offer

I've come by a supply of disposable anti-static wrist straps, which are a great (and safe) way to make sure that you are grounded when working with static-sensitive devices such as CMOS integrated circuits. Sure, you can run a clip lead from your wrist-watch or ear lobe to a convenient ground, and that will take care of static. But it will also route any high-current electricity that you happen to come in contact with, and is a bit like working with your bare feet on a wet floor. The SAFE way to do it, as with these straps, is to incorporate a current-limiting resistance so that static will be grounded off without an increased risk of electrocution.

While I've started including one at no charge with the Island Keyer kits, I've got more than I really know what to do with. So here's the deal--

Send me One Dollar (\$1.00) and an SASE with 55 cents postage on it and I will send you FOUR wrist straps. Please send the dollar in the form of a green stamp, and the SASE should be an ordinary business-size envelope (DLL or 4x9 etc). I'll also include some product literature since it won't increase the postage cost. Or if you are ordering something from Milestone Technologies via the web site (url below) or by phone just mention this to get any number of wrist straps at 4/\$1 with no additional postage cost.

By the way, these are genuine 3M 2209's in original sealed packaging, and they are UL certified. They include the wrist

strap, paper lead with embedded conductor and resistance, and copper foil tape to attach to a convenient ground.

Send your dollar and 4x9 SASE with 55 cents postage to:

Milestone Technologies
3140 S. Peoria St. Unit K-156
Aurora CO 80014-3155

73
Marshall
AA0XI
<http://www.mtechnologies.com/mthome>

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: "Douglas L. Datwyler" <datwyler@mail.aros.net>
Subject: [12490] AT-11 holes
Message-ID: <330B0C76.4A54@mail.aros.net>

extracted from digest
--->

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Brent Alexenko <alexenko@prairie.nodak.edu>
Subject: [12537] Can you hear me? (Part III)
Message-ID: <Pine.OSF.3.91.970219173232.27643A-100000@prairie.nodak.edu>

Well....

Things are looking up!

In my quest to get an antenna up, I've picked up a tuner and a 35' length of copper wire. Stealth it is not, but since I'm not home until dark I figure it won't matter. The salesdude told me that it would work as a long wire down the side of the apartment. He also said that it wouldn't need a counterpoise, or ground, or anything like that.

I've heard conflicting reports on that. Is that true?

It looks like I'll be able to toss this out the window and "give 'er wood." Hopefully with this, or something like this, I'll be able to answer the sked requests I've been getting.

Folks, we're getting closer!

Thanks for all the input!

Brent
KG0WE

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: ALK0FRP@aol.com
Subject: [12440] COLORADO QRP CLUB CONTEST
Message-ID: <970218191006_1049815515@emout17.mail.aol.com>

IT SHOWTIME FOR THE CQC QSO PARTY ON SUNDAY.

Greeting from K0FRP

Time/ Date

2200z on 22nd to 0400z 23rd thats 3pm to 9 pm Mountain time, you figure the rest for your zone.

With the late start, it puts emphasis on the low bands.

I will operate my station using W0CQC (I can't win, so go for it break the record).

1000 point bonus for working W0CQC add to end of your score.

Exchange report, SPC (state, providence / country), CQC # or power out, and first name. so example 599-CO-#32-AL (gee that makes it easy) (you have my report already) I may not give you 599 .

4 pts for non-CQC 6 pts for CQC # CW, SSB 2 non, 3 member

Can work stations on each band, spc's counts on each band, but name counts only once, Max of 26 names one for each letter of the alphabet. Al is an "A" Jim is a "J"

etc. Zeke's and Xavier's WE NEED YOU !!! Names Do not count for each band.

example :

1000 QSO pts X 94 SPC (30 on 20m, 30 on 40m, 34 on 80m) X

22 first letter names = 2,068,000

I will stay at about 24 wpm on my keyer but space the letters out a bit.

Novice band will go to 7 wpm with spaces. 80m and 40m.

I will slow down for anyone just say QRS.

Will be on 20m first then 40m then 80m. Last years winner were three stations out of Colorado so thats good (spread the wealth).

DX just call if you hear me I'll hear you.

Antennnas

4 el 20m yagi at 82 ft

2el 40m yagi at 70ft,

2 el phased loops on 80m E/W

Questions? answers on reply

A1 K0FRP

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: "Bob Tellefsen-CNSE97" <Bob_Tellefsen-CNSE97@email.mot.com>

Subject: [12477] Connectors

Message-ID: <M1295275.003.u7cg2.1.970219062905Z.CC-MAIL*/OU=LMPCC10/OU=ILBE/
PRMD=MOT/ADMD=MOT/C=US/@MHS>

I've seen a couple of posts lately, complaining about UHF female connectors on equipment instead of BNC.

My own opinion--gosh, I'm glad you asked--is that I prefer the UHF. If I want to work with BNC, I just put an adapter on and off I go. However, consider this

.
If you have a BNC chassis mount connector and want to use some cable with a PL259 on it, the UHF female to BNC male adapter exerts considerable leverage on the BNC connection, especially if you are using RG213. The reverse--BNC female to UHF male--is much less demanding on the equipment, and less likely to do damage. I prefer UHF connections in the field for ruggedness.

Anyway, one old codger's opinion.

72, all,

Bob N6WG

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: Ken Evans <evans.ken@bwi.bls.com>

Subject: [12507] Correspondence - Why QRP

Message-ID: <2.2.32.19970219163954.00695218@bwims.bwi.bls.com>

I read the March QST Correspondence about why QRP and felt it needed a reply. Here is a copy of my letter to the League, I encourage others to reply. BTW, according to QRZ.COM, KD6POC is newly upgraded to extra (Sept'96) and is 17 years old. I sent him a copy of this letter. He is probably uninformed about QRP, so let's not flame him beyond recognition!

72,

Ken W4DU

W4DU@bellsouth.net

>>Date: Wed, 19 Feb 1997 10:27:03 -0400

>>To: qst@arrl.org

>>From: Ken Evans <evans.ken@bwi.bls.com>

>>Subject: Correspondence - Why QRP

>>Cc:

>>

>>WHY QRP? A RESPONSE

>>

>>In the Correspondence section of the March '97 issue of QST, Adam McLaughlin, KD6POC, poses the question of why QRP. I'll attempt a response.

>>

>>In Mr. McLaughlin's example, the QRP operator has to depend upon the skill and equipment of the poor ham at the receiving end of the QSO to dig a weak signal out of the mud. He gives all credit, as he should in this example, to the ham who stuck with it and copied this weak and noisy signal. This scenario happens daily in amateur radio and it doesn't necessarily involve QRP stations. It is also the exception to the QRP QSO, not the norm!

>>

>>In most all of my QSOs, the operator at the other end is surprised when I tell him I'm QRP. The usual response is, " You're kidding, you're too strong to be QRP". In a few cases, the other operator simply doesn't believe me. Here is an example. Let's assume I'm in QSO with Mr. McLaughlin. He is running 400 watts output and that yields an S-9 on my calibrated S Meter. If he turned his power down to 1.5 watts output, he would then be an S-5 at my end! S-5 is hardly a weak signal lodged in the noise. It is usually Q-5 and what many call arm chair copy.

>>

>>So, why QRP? First, it helps maintain the spirit of the FCC requirement that we only use the minimum power necessary to maintain contact (Although five watts can be more than necessary!). It also helps to reduce the level of interference on the bands. But beyond these reasons, is what QRP has evolved to in recent years. Most QRP operators I know are involved because they enjoy building and operating small, portable amateur equipment. An

examination of the QRP journals and home pages will reveal numerous home-brew articles and kits (Yes, there are still kits available). There are numerous clubs around the world that have "kitted" transceivers, tuners, and antennas that fill this bill. Awards and operating events for various QRP modes are also sponsored. Simply stated, "It's fun!". . For those with Internet access, check the QRP ARCI's homepage at,

>>

>><http://RTPnet.org:80/~qrp/>

>>

>>It will give additional data and provide links to other QRP resources.

>>

>>Finally, I think QRP operators are accomplishing something special. They are putting out a clean respectable signal that under most conditions is easily copyable and minimizes unintentional interference to others. In many cases, this signal is emanating from equipment that was built or designed/modified by the operator. This is what makes many hams special, and it certainly applies to the QRP operator.

>>

>>If Mr. McLaughlin (or anyone else) would like try a QSO with a QRP station, I am available for a schedule on any band from 160 through 10 meters, sideband or CW. Or simply turn the power down on your rig and see just what the results can be.

>>

>>Ken Evans

>>W4DU - Atlanta, Georgia

>>W4DU@bellsouth.net

>>

>>

>>

>

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: Ken Evans <evans.ken@bwi.bls.com>

Subject: [12515] Correspondence - Why QRP

Message-ID: <2.2.32.19970219173622.006a63f8@bwims.bwi.bls.com>

Thanks to all who pointed out that my recent post had the incorrect address for the QRP-ARCI homepage. It should be:

<http://RTPnet.org:80/~qrp/>

Accidently dropped a slash/

Ken W4DU

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: svecbrdk@well.com (L.Svec,W.Burdick)
Subject: [12480] Current drain answer: NorCal 40A, 15 mA; Sierra, 30mA
Message-ID: <199702190732.XAA03684@mail.well.com>

There were a few questions about current drain posted to the net. This is a favorite topic of mine, since low current battery operation is one of my eternal design goals :)

As a general rule, no-IF-amp receivers based on the NE602 draw around 15 to 20mA. You can reduce this further if necessary by using a low-quiescent-current regulator for the regulated voltage (usually 5 to 8V). Also note that most AF amp chips we use in these designs operate class AB; the current they draw varies with the load impedance and power output. Thus if you switch to a speaker and crank up the volume, you can see 50 to 100mA on peaks.

In the case of the NorCal 40A, the receive-mode current drain is around 17mA, and add a few more mA if you build in a KC1 keyer/counter. The transmitter is also extremely efficient, with a current drain of only 250mA average at 2W output running from 12V. Typical final amplifier efficiency is 70 to 80%.

For the Sierra, the receive-mode current drain is 30mA without a KC2, and about 35mA with. This should be of interest to backpackers (or those running on batteries at home) who need a multi-band rig. Other multi-band rigs are much higher. Selected examples:

HW8	90mA
QRP+	200mA
OHR400	300mA
Scout	600mA

These rigs also have much higher transmit-mode current drain than the Sierra, partly due to their higher output power. (The Sierra is *supposed* to be a 2 to 3W rig when operated from batteries--it's a good compromise for backpacking!)

Of course, the OHR400 and Scout are not likely to be carried in a pack due to their weight. And of course the OHR400 is a great multiband kit for home use, with very solid construction.

73,
Wayne
N6KR

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: "KA5T Larry Wise" <lewise@inetport.com>
Subject: [12453] Debugger #1 Day 3
Message-ID: <199702190239.UAA03158@admin.inetport.com>

The badgers are making cheeping noises and casting mean looks my way, but no power on yet...

Zounds Jeeves, whats taking so long???

Finished the installed parts and circuit verification. Nothing new to report... Could actually read the markings on all but a couple of the parts... Amazing... Doesn't look to me like any of the parts are wrong... Maybe the number of turns on a couple of the toroids....

Been dwaddling, putting off tampering with those toroids, but two of them need work I think. The VFO toroid has a 1 inch or so extra length of wire on it, and the input toroid (did I mention #32 wire??) is awfully loose so here we go. And of course the one with the incorrect connections to the board(18)....

Did I mention that in addition to being green on toroids, they're not my favorite weenies???

Fired up the ugly xtal test osc and measured all the xtals in sight. Boy, if the TS-450 just had a 1 hz readout.... Fire up the osc, key the sidetone on the rig and tune for zero beat... Can really hear the audio zero beat clearly... Can get down to real ZERO beat.... Neat.... Of course with the TS-450 only reading out to 10 hz it leaves a little to be desired....

Anybody have a mod for the TS-450 to give a 1 hz readout???? :-) (Best test instrument in the shack!!)

Found that the RadioKit schematic corrected two errors that appeared in the CQ Sep 90 article:

The 2N3906 in the key ckt had the arrow on the wrong element.

The driver collector tank was shown as a tapped coil instead of a bifilar coil. (This from the previous QRP 20 article probably).

Both are fixed in the Radiokit diagram...

Got a note from Rich Wilkerson, WD6FDD, Santee, Ca. Said he built

one of these rigs and it worked right off the bat! He likes it...
Well Virginia, maybe there's hope yet...

Kids, Grandkids and pizza and wine now , so no more work tonight...

Oh yes, The 'Data Book for Homebrewers and QRPers' by Paul Harden, NA5N came today and I thumbed through it. Wow talk about timely...Started reading the section 'QRP RIGS - CIRCUIT ANALYSIS". I may learn enough to nail this Mutha by saturday yet!!! Looks like everyone using a soldering iron should not be without one... And you NC38s people, there's a special offer in the instruction sheets for you...(No I'm not affiliated with, and do not receive blah... blah... blah.. Just looks like good stuff!!

After pizza and wine I'm going to finish that section if I don't fall asleep...

Lets see... If I get this working by Saturday (end of day seven) do I get to use it for FYBO????? Hmmmmm...

Later

KA5T - Larry Wise - Georgetown, Texas - lewise@inetport.com QRP-L 89
ex: KN8OSG K8OSG(1959-1967 MI) W6HED(1967-1968 Ca) W4ZTB(1968-1978 FL)

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: John Dorson <jdorson@bbs.mpcs.com>
Subject: [12530] december qrpp, i have one
Message-ID: <199702192119.QAA27489@bbs.mpcs.com>

didn't get your dec. 1996 copy of qrpp.
well i joined last qtr of last year and did not recv. mine either so
i got the set for the entire year which i am paying 18.00 for.
and guess what. today i recv'd my own copy for dec. 1996, so
don't give up. you may get it after all. but if in a week or so you
don't i will be glad to give you mine and i'll pay the postage.
however please don't ask for it until 2/26/97 and only request it
thru my direct e-mail please. i don't want to clutter up the list...
Thank You

John Dorson Real Estate Consultant in Melbourne Beach, Brevard County Florida
E-Mail To: jdorson@bbs.mpcs.com

Trying for WAS -	AL,AK,AZ,AR,CA,CO,CT,FL,GA,IL,IA,KS,KY,LA,ME,MD,MA
and worked these:	MI,MN,MT,NH,NJ,NY,NC,ND,OH,OK,OR,PA,RI,TX,VT,VA,WA
	WI

|-----|
K2JHU only QRP... CQC #351, GQRP # 9092, QRP-L #672

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: SBJohnston@aol.com
Subject: [12470] Drifting NC38s on transmit
Message-ID: <970218235626_1181160895@emout08.mail.aol.com>

Ori wrote, regarding a 38special drifting on TX ...

>You might want to try a 0.1uF bypass cap on the diodes
>band side to ground, might kill that stray RF.

Hey -- I tried that a few days ago, and it did the trick nicely. I used 0.01
uF discs on the bottom of the board. Great minds think alike!

73 Steve Johnston WD8DAS

sbjohnston@aol.com

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: "KA5T Larry Wise" <lewise@inetport.com>
Subject: [12454] ECG conversions
Message-ID: <199702190303.VAA04083@admin.inetport.com>

Anyone know if the device conversion database for ECG is
on line somewhere??

KA5T - Larry Wise - Georgetown, Texas - lewise@inetport.com QRP-L 89
ex: KN80SG K80SG(1959-1967 MI) W6HED(1967-1968 Ca) W4ZTB(1968-1978 Fl)

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: "Ed Manuel" <n5em-qrp@msn.com>

Subject: [12473] Goodbye, Handbooks!

Message-ID: <UPMAIL06.199702190429580317@msn.com>

Gang,

I have decided to make the plunge and buy the ARRL Handbook on CD-Rom. That means that I am going to have about a dozen handbooks from 1972 through 1993 to unload. Now, only a rare few want to pay to have these critters mailed to them (you know who you are :-)

Question: If I lug (and I do mean LUG) them to FIDM, are you guys gonna lug them away? Maybe even trade some stuff for them? Inquiring (and dealing) minds want to know before the back pays the price.

Ed, N5EM

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: QLF%mimi@magic.itg.ti.com

Subject: [12492] GOTHAM

Message-ID: <9702191445.AA07397@itg.ti.com>

From: Brad Bradfield QLF

Subj: GOTHAM

Martin, W9XN, wrote:

>We would actually go spying around his QTH to find the one element
>beam... whatever it was... (we had no idea what we hoped to find). All
>we ever saw was this bent up old Gotham vertical. He had it mounted with
>the feed point up about 20 feet. He had a wooden ladder to it's feed
>point. We presumed that the ladder was to get at the base loading coil.

<snip>

>Very 73,

>Martin W9XN QRP-L #998

Careful now Martin. You're dating yourself by even admitting that you remember Gotham antennas.

72's es 73's,

Brad, WB0CGH

Brad Bradfield, PE

Electrical Design Engineer

(H) 817-321-2960

Texas Instruments, Inc.

(W) 972-462-6230

(Soon to be: Raytheon/TI Systems)

Real men talk with their fingers!

QLF@MSG.TI.COM

WB0CGH@W05H.#DFW.TX.USA.NA

ARRL Life Member QRP-L #377 SMIRK #4906 IEEE(M) ARS #72

Collector of wireless and landline Morse keys and accessories.

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: "Len W. Touth" <len@infinet.com>

Subject: [12526] Hats Off to the Non-QRP Ops who listen for us!

Message-ID: <199702192038.PAA22354@mail1.infinet.com>

Hi Gang!

Wow, I can sure understand the buzzing regarding the article in QST on QRP operating. Well, everyone is entitled to their opinion. He has his, we have ours. That's America!

One thing he mentioned that I do agree with is the patient operator on the other end that is working hard to decypher our QRP signals. Weather that other station is another QRP op, or a QRO op, my hat is off to them.

I remember one day last summer working some poor guy in San Diego under horrible band condx. I had difficulty hearing his 100 watt signal. BIG TIME difficulty. I can hardly imagine what my signal sounded like to him. He hung in there with me for 1/2 hour until he got my name, call, QTH, es power output. He was so happy when he did copy correctly that he sent a big *yipeee - we made contact!* with his QSL card. He also mentioned that it was the roughest contact he ever made, and that at times, he was copying changes in noise level. (Smile).

I didn't have the heart to tell the guy that my two watts were being driven into about 20 feet of random wire stapled to my patio ceiling. He would have thought I was nuts.

So, even though we disagree with the article (either in part or whole), let's agree to thank the patient ops out there (us included) who have the desire to listen for the QRP operator. We'll be glad we did.

Best 72/3

Len
KG8SF
len@infinet.com kg8sf@key.com

QRP-L # 841 CQrp # 2 ARCI # 9025 FISTS # 2134

CHARTER MEMBER - THE COLUMBUS QRP CLUB - CQrp
Web Page: <http://www.infinet.com/~len>

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: AD4KB@aol.com
Subject: [12494] Help - It's Back....! (2KHZ)
Message-ID: <970219100031_751591666@emout07.mail.aol.com>

I was having trouble earlier with my 38S tuning range - it was limited to 2 khz. After doing some parts replacements/substitutions, I came up with a broader (20khz or so) range and thought all was well. Then I noticed that the thing wouldn't work all the time at the low end of the band. When a LCR meter came that I had ordered, I was horrified to find that the 10 uh choke I had peeled a few turns off of was actually a 100uh choke, and I had it pruned to about 40uh. I asked for a couple of replacement chokes for L1 (which came very quickly), and just as soon as I soldered them in, I was back to a real nice sounding tone - but only 2KHZ ! I have replaced the diode, paralleled the diode, put in a varactor, checked the voltage on the pot (0 to 8 volts), replaced the pot, and everything else I could think to do.

Still 2khz range! The only thing I haven't tried is replacing the crystal. Any Ideas? The rest of the rig works great (the receiver is sensitive, the transmit tunes to a pretty clean signal, etc.) It just won't tune more than 2khz with the 4.7 or 5.6 inductor.

73 de Jim (AD4KB@aol.com)

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: cc013@ccosmo.net (Cosmo Computers)
Subject: [12456] Help with HW-7 Parts ??? Where???
Message-ID: <19970219031353979.AAA140@rt4-18.globalpac.com>

Hello there,

How do I find Heathkit HW-7 parts ??? And leads are needed Thank You
Lee, cc013@ccosmo.net

cc013@ccosmo.net

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: tmh@world.std.com
Subject: [12484] Hidden CW on "Mystery"
Message-ID: <Pine.SGI.3.93.970219082834.24609B-1000000@world.std.com>

"Mystery" is on every week on PBS, and is currently an "Inspector Morse" mystery, which will last for a few weeks. Last night the host of the show, Diana Riggs (of Avengers fame) said that the guy who does the soundtrack 1) puts the name "Morse" in CW into the soundtrack in each episode, and 2) puts the name of the murderer in CW in each episode too. I definitely heard a blast of CW in the closing scene of last night's show.

If interested check your local listings for when "Mystery" airs since I'm pretty sure its different for each PBS station.

-- Tim N1PAZ
tmh@world.std.com

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: scicior@uswest.com (Steve Ciciora)
Subject: [12520] Home Brew Spectrum Analysers
Message-ID: <9702191954.AA07621@sp5-316.uswc.uswest.com>

The latest Communications Quarterly (I think the title is correct; I picked mine up from Ham Radio Outlet) has an article about an 80 db High Performance IF for home brew spectrum analysers, using an AD606. Does a great job talking about building your own. I can be talked into lending out my copy, if someone doesn't want to spend \$10 on the mag.
Steven Ciciora
KB0PJF

Scott KB1NW wrote:

> There has been some recent discussions of scopes and spectrum
> analyzers.
>
> I have an article from the January 1988 issue of 'RF Design'...

> "A Simple Spectrum Analyzer"... Pocket-Sized 0 to 100 MHz Unit
> Uses Only Three IC's.
>
> The 3 IC's are: MC3356, NE602, TL084. A Murata SPE 10.7 ceramic
> filter, Toko CBT 145MHz helical resonator...
> (snip)

This design was reprinted in the Technical Topics column in
RadCom, and it and follow-on discussions have now made their way
into "Technical Topics Scrapbook 1985-1989" from the RSGB.

Another one to look for was in Electronics World a couple
of issues back which used very familiar Mini-Circuits bits
(SBL-1, POS-400) to make a simple spectrum analyzer.

Then there are all the designs built around UHF TV tuners.
Someday I *must* finish mine...I've even got an AD606 waiting
to be the heart of a serious IF strip.

Laura Halliday VE7LDH	"C'est une femme mutine, assez
lhalliday@creo.com	elegante, grave et legere, ayant le
ve7ldh@amsat.org	sens du confort et du plaisir
Locator: CN89mg	en tout." - C. Deneuve

-

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: PaulKB8N@aol.com
Subject: [12511] How to unsubscribe
Message-ID: <970219125905_1181206690@emout15.mail.aol.com>

Gang,

QRP-L is one of the best forums going on a wide variety of subjects.
Unfortunately, my volume of business and personal E-Mail has become
unmanageable and something must give. How do I unsubscribe?

72, But Only Temporarily, Paul

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: chuck.olson@sbaonline.gov
Subject: [12501] ISLAND KEYER - HELP!
Message-ID: <9702191211.A0970wk@sbaonline.gov>

Hello Folks -

Please excuse this message - I tried to send a message directly to Christopher but it bounced.

Christopher -

Your EEPROM is probably not damaged. The contents were probably just scrambled during the power "event". You can reset the configuration data in the EEPROM by following the Resetting the Sidetone Frequency procedure in the Operation part of the manual.

Since you stated that you had trouble with the sidetone adjust, you can also try an undocumented reset of the keyer. This is accomplished by holding down the speed key and then resetting the keyer with the reset / kill key. However, you'll then have to change or reset the sidetone to make the reset "permanent".

Best Regards,

Chuck Olson, WB9KZY
chuckolson@juno.com
Jackson Harbor Press
Washington Island, WI

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: gsurrency@juno.com (Gary L Surrency)
Subject: [12534] LDG autotuner question
Message-ID: <19970219.154312.9918.1.gsurrency@juno.com>

While aligning my QRP autotuner, I noticed that even with nearly 10 watts of power input, the adjustments for the stated 2.5 v on the variable resistors was achieved with the setting more towards the "hot" side of the pot than I expected.

I checked all the parts, and everything was just fine. The measurements were taken with a DVM that has 10 megohm input resistance, so there shouldn't be appreciable loading of the voltage developed by the SWR sensor and diodes. I was applying a 9 watt signal from my TAC-1 on 40m to make the adjustment.

So, I looked at the QRO LDG autotuner I built in Feb of last year that I happened to have the cover off of, since I was replacing all the

cheap pushbuttons I used in it. Its SWR toroid has 14 turns of #28 wire on it, where the QRP unit has only 10! I also looked in my MFJ-948 antenna tuner at its SWR toroid and found it also has 14 turns of wire!

At 100 watts of power, the adjustment pots in the QRO unit end up in about their mid-position for a measured voltage of 4.5 volts. The pots in the QRP tuner end up at a position that would be about 4 o' clock for a reading of 2.5 v at 9 watts, looking from the front panel toward the SWR sensor circuitry. It seems to me that the QRP tuner should be the one with more turns on its SWR toroid sensor, since many people run 2 watts or less output.

Would it make more sense to add a few more turns to the QRP tuner's toroid, thereby increasing the developed forward / reverse voltage so that the adjusting resistors would be set more to the center of their range and lower power would be needed to produce the required SWR voltages?

I pose this question for those of you to ponder that haven't built or finished their QRP autotuners. Especially those who intend to run more toward the QRPP levels. Maybe Dwayne Kincaid of LDG could add his comments to this question.

I just can't fathom why the low power tuner's SWR toroid would need fewer turns to develop adequate voltage for SWR measurements. All the components seem to be the same in either the QRO or QRP tuner. What gives? I don't think I'll add any turns to mine, since I almost always run full QRP power, but others may need the additional SWR sensitivity to allow the tuner's analog input to read accurately.

Could the mix of the toroid be different? The software in the uP? Smaller badgers? ;-) What?

72,

Gary Surrency AB7MY
S&S TAC-1(40&80m) and ARK30, AT-11 (QRO and QRP)
QRP-L #571 Chandler, AZ (near Phoenix)Grid Square DM43BH
Az ScQRPions

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: JEVERHART@cayman.vf.mmc.com
Subject: [12522] March '97 QST Don't miss it!
Message-ID: <970219150515.2060b1f9@cayman.vf.mmc.com>

Gang,

Before you go to the Correspondence section of QST and get annoyed, stop off at page 36 and get inspired.

There is an article there by a usually silent member of the qrp-l community that you really shouldn't miss. It's a homebrewing article that should inspire **all** us of homebrewers. you'll see what I mean when you read it.

72/73,

Joe E., N2CX

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: SBJohnston@aol.com
Subject: [12469] Molex connectors
Message-ID: <970218235622_786150847@emout05.mail.aol.com>

Ed Tanton N4XY wrote, regarding molex connectors...

>I would not use them for low power audio or any other
>low amplitude signals, but for ordinary connections for
>power supplies or switching of 12V-or more-and
>so on they are excellent connectors for the money.

Many, many broadcast studio consoles use the smaller Molex (and the similar AMP series of connectors) for audio and low voltage control connections. I have experienced very little problem with the Molex connectors in these sort of applications. The few times I've had trouble, it was due to faulty crimping, not the male-to-female pin contact. I've been very pleased with Molex connectors... but don't get me talking about the old Cinch-Jones plugs! Now **they** did have trouble with low-level signals...

73 Steve Johnston WD8DAS

sbjohnston@aol.com

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Barry Keating <Barry.P.Keating.1@nd.edu>
Subject: [12486] N/T FOX Tonight (Wednesday)
Message-ID: <v03007800af30b3dd3dbb@[129.74.87.62]>

TONIGHT !

*** Wednesday Night - February 19th - (local date) ***

Late Night as requested :-)

I will operate "near" 7.122. I have an analog dial so be generous with "looking around."

Wednesday, February 19th (local date)
10:00 - 12:00 pm local (EST) time
0300 - 0500 UTC
frequency; "near" 7.122+-
QTH South Bend, Indiana
QRP-L# 642
MFJ 9040 at 5 watts

Barry Keating
WD4MSM

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Barry Keating <Barry.P.Keating.1@nd.edu>
Subject: [12532] N/T FOX Tonight - Last Reminder
Message-ID: <v03007803af312737b22e@[129.74.87.62]>

TONIGHT -- Wednesday Night - February 19th - (local date)

Late Night as requested :-)

operating "near" 7.122. I have an analog dial so be generous with "looking around."

Wednesday, February 19th (local date)
10:00 - 12:00 pm local (EST) time
0300 - 0500 UTC
frequency; "near" 7.122+-
QTH South Bend, Indiana
QRP-L# 642
MFJ 9040 at 5 watts

Barry Keating
WD4MSM

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: "Jeff M. Gold" <JMG@tntech.edu>
Subject: [12488] N38S-anyone recently do all mods?
Message-ID: <01IFLD1MC67M8WX92R@tntech.edu>

Hi!!

well still holding off on my N38S. Have all the parts sorted and have acquired the parts for the mods (or at least for the original mod). There is a collection of all the email to the list on the mods as of the end of Jan. It is HUGE!!!! think it would take the rest of the year to sort out.

My question:

has anyone RECENTLY successfully built the N38S with the additions for higher power, tick and such? if so, boy would I appreciate hearing a recommended procedure for incorporating the addition mods without having to put parts in and then take them out later.

thanks!!!

72
Jeff, AC4HF

PS worked LZ1LZ early this am on 20 meters.. using my NW8020. got through first time, and band seemed like it was not awake yet

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: John Dorson <jdorson@bbs.mpcs.com>
Subject: [12448] need help on 49er mod
Message-ID: <199702190142.UAA22164@bbs.mpcs.com>

hi folks. well i started working on my 49er again last night. i removed it from it's alotids case for installation into another alotids case based on floyd smithberg's artical in the june 96 issue of qrpp.

while the board is homeless i wanted to modify the front end changing c20 from 120pf to 180pf and replace ther rfc1 with a torroid. my problem

is that the only ref. i can find is to use a ft-37-43. this was from
an artical modifying the "b" board and i have an "a" board. will this
torroid do in the "a" version???

thanks for any advice you can give me regarding this mod...
Thank You

John Dorson Real Estate Consultant in Melbourne Beach, Brevard County Florida
E-Mail To: jdorson@bbs.mpcs.com

```
-----  
| Trying for WAS -      AL,AK,AZ,AR,CA,CO,CT,FL,GA,IL,IA,KS,KY,LA,ME,MD,MA|  
| and worked these:    MI,MN,MT,NH,NJ,NY,NC,ND,OH,OK,OR,PA,RI,TX,VT,VA,WA|  
|                      WI                                           |  
|-----|
```

K2JHU only QRP... CQC #351, GQRP # 9092, QRP-L #672

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: torell@sicom.com (Kent Torell)
Subject: [12509] New Norcal Design Contest ;-)
Message-ID: <v02130502af30e1773ef0@[192.91.202.41]>

OK, Norcal has just acquired a medium sized stock of 7.3728 crystals. What
kind of / nifty / useful / radio / test equipment / gee-whiz / gadgets can
you design with these? Could use a divide by 2 to get 3.6864...I think
there are a few 80 meter people around there...?

Kent Torell torell@sicom.com 602-483-2867 x230
SICOM 7585 E. Redfield, #202 Scottsdale, AZ 85260
AB7OA qrp-1 57 ARCI 9075 DM33xn 33.55 N 111.078 W

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: john andrews <jm165723@eee.org>
Subject: [12461] NTE/ECG web-site correction.....
Message-ID: <330A7AE8.74B8@eee.org>

Yep....Thanks, Chuck...(durn left-handed keyboards)

<http://www.nteinc.com>

72, John-N5INZ

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: gsurrency@juno.com (Gary L Surrency)
Subject: [12516] OHR Group Buy
Message-ID: <19970219.114743.9918.1.gsurrency@juno.com>

Hey! When is the deadline for the OHR group buy? Am I too late already?

Thanks,

73,

Gary Surrency AB7MY
S&S TAC-1(40&80m) and ARK30, AT-11 (QRO and QRP)
QRP-L #571 Chandler, AZ (near Phoenix)Grid Square DM43BH
Az ScQRPions

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Philip Karras <ke3fl@access.digex.net>
Subject: [12528] Other Kits, 40 meter QRP
Message-ID: <Pine.SUN.3.94.970219154930.17693A-1000000@access5.digex.net>

I finished my K6LMN kits and tested them. At 12.6 Volts the TX put out a whopping 3/4 watt- at 14 Volts it went to 1.0 W. I adjusted the driver and now I can get about 1.25 W on 12.6 Volts and almost 2 Watts at 14 V. I could adjust it more but gave it a try.

First night no takers

Second night had a 30+ min QSO with AA1PY/Scott using 100W Drake TR-4. We tested the RX on my end and I was able to copy his 1W but too much QRM so I had to request he go back to 20W. Some better filters might do the trick here, Hmmm perhaps I'll try the ol' RS DSP.

I was using a homebuilt 80 meter dipole up at 30 feet fed with RG8X coax about 90 feet with a homebrew straight key (the IR key from LB's QST article) and a 12V 1.2 AHr gel cel for power. The speaker was the receiver from a dead telephone, which works AOK!

Here were Scott's comments, "It was fun testing out the RX. UR rig sounds FB, solid, no shirp, clicks or drift...."

You can contact K6LMN at:
Roger WAGNER, K6LMN
1045 S MANNING AVE
LOS ANGELES CA 90024
P: 310-474-2447

Once again the usual disclaimers apply, just a satisfied customer.

72 & 73 de KE3FL/Phil
:-)

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: EScott@gstworld.net (Erin Scott)
Subject: [12525] Phasing quads
Message-ID: <000141CE.3117@gstworld.net>

Does someone know of a good "rule of thumb" formula for the
appropriate spacing between stacked quads. Thanks in advance>>>Erin

Outside of the killings, Washington has one of the lowest crime rates in
the country. -- Mayor Marion Barry, Washington, D.C.

Erin KC7LEU
KC7LEU@N7UVH.#NID.ID.USA.NOAM
escott@gstworld.net

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: "J.B. Fox" <w5hir@mail.phoenix.net>
Subject: [12441] QRP Contact
Message-ID: <199702190055.SAA25280@mail1.phoenix.net>

HI everyone, I was trying out my new loop antenna, roof mounted. I

tuned up
on forty and saw that the band was very busy, lotsa QRM. I called CQ
several times,
and bang, here comes a beautiful s7 signal calling me. WB8APR/qrp he
signed. I gave him the usual
rst and name and qth . He said he was running 500mw into a yagi antenna.
qth Michigan.
Well John and I chewed the rag for about 20 minutes. He still held his own.

I wish everyone who doubts the ability of QRP rigs to compete could
have heard
his fb signal..

Can hardly wait to get my 38 special finished along with the AT-11.

J. B. "FOXY: Fox w5hir

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Stan Skelton <sskelton@cIn.etc.bc.ca>
Subject: [12513] qrp-1: 49'er questions ??
Message-ID: <Pine.SUN.3.95.970219100939.16770A-100000@cIn>

Hi all...I've got the two 49'er schematics in front of me here,
#1 from NORCAL's web page, and #2 from CQ magazine, feb 97.

In #2, C8 seems to be a 50pf variable cap between the xtal
and RFC6 (15uH).....C8 also seems to be a .01uF cap grounding
Q1 (J309/2N5484) ?????

In #1, Q3 is a 2N3866, in #2 Q3 is listed as a 2N3666 ???

In #1, between C16 and the antenna, is RFC6 (2.2 uH) while
in #2, between C16 and the antenna, is RFC5 ((2.2uH)? This
may not seem to matter but in the revisions, these numbers
(RFC5/6 etc.) are critical.

In #1, between the xtal & ground is RFC8 (2.2uH) while in
#2 its called RFC6 (15uH).

There's no C6 (that these tired ol eyes can see) yet it's
mentioned in the revisions?

Any help from 49'er guru's would be appreciated!
Stan VE7SKT, qrp-1 #34, OHR Sprint 80

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Stan Skelton <sskelton@cln.etc.bc.ca>
Subject: [12498] qrp-1: help on 40/80'9er
Message-ID: <Pine.SUN.3.95.970219074505.4390A-1000000@cln>

Hi all...can anyone tell me what revision the circuit in Feb CQ mag. is and if it is accurate? I want to start a club project using it as a basis and have all the NORCAL stuff from the web page but it's a different circuit...

Also...can anyone tell me of a source for G-10 circuit board material (the green pcb stuff) ?

tnx
Stan VE7SKT, qrp-1 #34, OHR Sprint 80

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: jim hale <kj5tf@mctc.com>
Subject: [12487] QRPP
Message-ID: <330B7E50.1D90@mctc.com>

My Dec96 QRPP came yesterday, tuesday Feb. 18th. It just running late, fear not... QTH is Kingston, Arkansas, 72/3'z de Jim ARQRP#2

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: "Douglas L. Datwyler" <datwyler@mail.aros.net>
Subject: [12489] QRPP
Message-ID: <330B0A2C.40@mail.aros.net>

extracted from digest
--->

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Elliott Lawrence <edl@pacbell.net>
Subject: [12085] QRPP
Message-ID: <3305E913.66A3@pacbell.net>

I am one of the few who has not received the December issue of the QRPP from Norcal. There are no copies remaining. Looks like the post office has lost it...permanently. So can anyone out there who has a copy of QRPP make a copy for me. Copying costs and postage provided.

I would hate to miss this great issue. Please let me know what anyone can do to help me.

Thanks in advance.
vy 72/73
Elliott WA6TLA

<--- end extraction

I also am without a QRPP. Respond to me personally with offers to help me acquire a copy. I will also pay postage and copying charges.

Douglas L. Datwyler WR70 Sandy, UT DN40
datwyler@aros.net

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: PGSPersEng@aol.com
Subject: [12472] QSL help
Message-ID: <970219004413_-2110185976@emout11.mail.aol.com>

Hi gang,

During last weekend's contest, I managed to snag HV4NAC (Vatican City). OK, so I cheated and went QRO due to the pileup.

Anyway, I *really* want this QSL card, so what's the most foolproof method. One DX QSL reflector gives IK0FVC as the manager, but I'm wondering if he also has a stateside manager. If I send a card to IK0FVC, how much \$\$ or how many IRCs are appropriate.

Thanks,
Paul, AA1MI

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: Jeff Grudin <grudin@pacific.vdbs.com>
Subject: [12533] RF bypass in a curtis keyer?
Message-ID: <330B5527.33AA@pacific.vdbs.com>

This is definitely not a QRP related subject. So hit delete if you don't want to help or read about it.

I have a norcal curtis keyer kit. I am using it with my DX70. The power for it comes from the accessory jack on the back of the keyer. It is mounted in a plastic RS box. There is a pushbutton tune switch.

When using it QRO I was having problems with it starting to key and sort of locking into sending a continuous string of dits or dahs. I put some 0.01 caps across the paddle jack to ground. This seemed to stop the problem. This didn't happen when using 5 watts even before the caps.

Now I have added a DB9 connector for a computer controlled memory keyer. It uses a 4401 transistor across the tune pushbutton switch. The computer tickles the base of the transistor to get it to key the rig.

Now when I use it QRO the keyer locks into a continuous keydown mode. Again this doesn't happen when QRP. also, it happens on 20M but not on 40M. I think this must be rf getting into the tune line or the transistor leads for the computer port.

Anyone have any idea where to try to bypass this? I feel like the problem is between the DB9 and the tune switch as the problem wasn't happening prior to adding the DB9.

Also, would it be worth putting the keyer into a metal box to try to reduce the RF inside?

Thanks for the help.

--

73 de Jeff AC6KW
grudin@vdbs.com

QRP-L #16	Private Practice : Companion Animals and
Exotics	
Norcal QRP #1292	Ocean Animal Clinic / Cat Clinic of Santa
Cruz	
	Santa Cruz,
California	

QRP'ers do it with less energy (but lot's of enthusiasm)!

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Peter_Simpson@3mail.3com.com
Subject: [12482] RF Design -- Simple Spectrum Analyzer
Message-ID: <85256443.00458E1B.00@hqoutbound.ops.3com.com>

The Toko CBT Helical resonator and the 10.7 Mhz ceramic filter are both available from Digi-Key. I have most of the parts for that project, just never got around to building it. It should cost considerably less than \$100 today.

The author, Helfrick, also wrote several articles for QST about building spectrum analyzers from CATV tuners.

Another source for spectrum analyzers is Science Workshop, at <<http://hoflink.com/~mbarlowe/>>, who have an a-la-carte kit which, for around \$200, is supposed to give you a 5 Meg to 900 Meg analyzer adapter, which you then hook to your scope.

I have my suspicions that the AVCOM analyzer, offered for \$1500 or so in the back of QST, is nothing more than one of these kits, attractively packaged in an inexpensive oscilloscope chassis.

As far as surplus commercial units go, there seem to be three grades. The big old clunker grade, exemplified by the HP 121T mainframes with plug-in tuning units. I suspect that if you can find a working one at a bargain price, they're OK, but no precision frequency readout and perhaps custom components inside that are impossible to replace.

The second grade is the HP 8590 type. At first glance, these \$10,000 list portables appear to be attractive, with on-screen frequency display and microprocessor control. They sell on the surplus market for around \$2500. I actually had a chance to pick up one of these and I turned it down. Reason being that, while they appear to be synthesized units, they are in fact running open loop, and the displayed center frequency can be as much as 5 Mhz off! I thought I could probably build something cheaper that had the same features.

The third grade is probably the one I'd buy if one came along. The HP 8591 and later units start around \$12,000. They're current production portables.

The later HP 8568 bench models are \$70,000 and up. Not much chance of one of these falling into my lap. I have one at work, though, and it sure is

nice.

There is a neat alternative, though, and I have one of them. They're called service monitors, and they come in various shapes, sizes and qualities. Mostly used by the land mobile and commercial radio repair places, the old ones are becoming less useful as trunking and digital modes begin to take over. You may find one of these 30 Mhz to 1 Ghz synthesized signal source, receiver, oscilloscope and spectrum analyzer combinations for anywhere between \$2500 and \$10,000 (or free if it's broken!). Mine's a Cushman CE-4B, and it's a real clunker. No spectrum display, but it does generate and demodulate AM and FM and has a neat little scope display. I got it for free and fixed it. Bad gate in the reference divider chain. Cost me \$50 for a manual.

Thanks to Steve, KD1JV, I have a 0-100 Mhz spectrum analyzer/scope adapter, which is my current building project. It's enough for me right now, but I think Science Workshop is going to be getting an order from me.

Regards,
Peter, KA1AXY

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Bigbob97@aol.com
Subject: [12485] Slow Burn!
Message-ID: <970219084623_1745948731@emout03.mail.aol.com>

Hi Guys:
I don't care what you say about QRP - just spell my name right! There's something to be said for the publicity, regardless of the opinion. Does anyone remember the "I hate Elvis" campaign back in the fifties? With the buttons saying it and all that? Seems to have worked then.
Bob WB2DHK in Jersey City, NJ

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: gsurrency@juno.com (Gary L Surrency)
Subject: [12504] Small glitch in the QRP LDG manual
Message-ID: <19970219.103002.10262.0.gsurrency@juno.com>

Gang,

When I built my QRP LDG autotuner, I noticed the wiring diagram for the front panel connections is not quite correct. I thought I would pass along my findings and save you some errors and de-soldering.

Figure 7 in the assembly manual shows the connections for the IND UP and CAP UP connection to be on the top of the momentary SPDT toggle switches. Actually, this connection should be reversed with the IND DWN and CAP DWN connections, respectively.

This is because a toggle switch typically activates the opposite terminal from the direction it is switched. In other words, UP on the toggle means DWN on the terminal. It is due to the mechanics internal to the switch. If you've ever taken one apart, you'll know why.

So, to agree with the front panel legend for the switches, wire the back of them OPPOSITE to what Figure 7 indicates. You'll know if you have it wrong, if when you first turn on the tuner, a press down on the CAP or IND toggle starts the relays clicking. At that point, all the relays are off, and should remain off when you select DOWN on either the IND or CAP switch. The LEDs should just flash, indicating that minimum CAP and IND settings are already achieved.

This agrees with the intended operation of the unit, and also with the operation of the QRO unit which I have, but it uses pushbuttons instead of momentary toggle switches.

Do I hear lots of groans from you that have already built the QRP unit? Or did you catch this? :-)

It certainly will work if you build it according to the instructions. It just won't be right, according to the front panel legend.

Mine works really well, and although it couldn't tune my 40m dipole on 80m, it DID when I loosened the coax fitting on the antenna connector, making the feedline and antenna together look like a Marconi antenna! Now I'm looking everywhere to find something to "tune" into an antenna!

72,

Gary Surrency AB7MY

S&S TAC-1(40&80m) and ARK30, AT-11 (QRO and QRP)

QRP-L #571 Chandler, AZ (near Phoenix)Grid Square DM43BH

Az ScQRPions

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: mike wood <K6MW@server.worldinfonet.com>
Subject: [12476] St Louis Tuner art work??
Message-ID: <330A9AE0.124B@server.worldinfonet.com>

I just got around to finishing my SLT and now want to gussy it up with some front/back lettering.

Before I go and reinvent the wheel, has anybody done any art work for this unit ?? If so, can I get a copy?

73, mike

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: adams@chuck.dallas.sgi.com (Chuck Adams)
Subject: [12478] TenTec 1340 Measurements
Message-ID: <199702190644.GAA12733@chuck.dallas.sgi.com>

Gang,

Due to some email back and forth between a couple of individuals in debugging a TenTec 1340, I have decided to bite the bullet and post the following measurements for the aid of anyone having difficulties. Please excuse the bandwidth. These people are having trouble getting through the phone lines to TenTec.

One of things that is great about this group is the number of people that help others. A lot of this is going on behind the scenes and involves personal email, phone calls, faxes, snail mail, and all kinds of technologies known to mankind. Someone reminded me the other day what is best about this group on 'elmering', i.e. the instructing and helping of anyone to learn more about any given topic. And that something about this group is not only the elmering but the fact that we are doing this remotely. The individual with the problem(s) still is the one doing the work.

Typically what happens in debugging is that the knowledgeable person comes over or the other way round and all the individuals involved get out the equipment and start right in. Before you know it the person with the problem is on the sidelines observing. That is not the way it should be and probably most often it is not, but even one time is too many.

Also, doing things remotely the person working on the problem can take his or her time and learn at their own pace. They just have to be careful, patient, and be sure to ask questions when the need arises. Now with digital cameras we can even set up a scenario and photograph it and put it on the net in a matter of minutes and show all the gory details. Ham radio is not the only endeavor that is gaining in this area on the Internet.

Anyways, here is the data as best I can give it. I have first started with a reference voltage from the power supply. Adjust appropriately and remember boys and girls your mileage may vary, i.e. your voltages don't have to that exact. Ballpark figures will generally work. If you think your voltage is too far off, let us know.

OK, be very very careful measuring these things. One lead from your probe shorting a 12V line to another part or another PC board trace will and can do considerable damage to the rig. I hate it when that happens. And there aren't too many of us in this group that have not done this if we have played around with a number of radios and such. Been there. Done that. PC board traces make nice fuses. The most expensive part in the whole rig makes a good fuse. Back in the tube days we were working with hundreds of volts and lots of power and it was more dangerous to humans. One of the reasons why I have never owned a large amplifier except for when my dad died and left me a Collins 30L1. I immediately sold it.

I am using a CircuitMate DM73 small digital multimeter. I like it 'cuz it has a fine point and can fit in small quarters where I need to make measurements. So, whatever meter you are using use a fine point to make the measurements. A piece of insulation over the tip except for the very end will save you a lot of grief. (A Hint and Kink for Paul Harden). We'll be doing the following from the top of the board as my rig is assembled, working, tuned, and just fine thank you and the Chuck Adams DFW rule is in effect. If I zap this thing while I'm doing this you will hear about it. :-) Even if I don't have to tell you.

DANGER: Be careful on the leads to parts. The lead may be at 12V or so. There is a ground plane nearby. Stay the heck away from it. It is not insulated with a solder mask. Keep your multimeter lead away from cases of IF transformers as they are at ground potential.

I am not trying to talk down to anyone with these instructions, above and below. It is best to start at ground zero so that I don't lose anyone.

-----Measurements to follow-----

Power Plug at + terminal = 12.79V

Using the X-Ray View foldout, reference section page 29, with radio front towards you as shown, lets start in the upper right hand corner. Oh, turn the radio on and the P/S. :-) ;-) You won't be measuring anything without power. I did this. :-) Good batteries in the meter will go a long ways too.

Q10 left leg = 12.79V
R54 left end = 12.79V
R51 left end = 12.79V
JMP3 both ends = 12.79V
JMP1 both ends = 12.79V
R12 left end = 12.79V
R33 left end = 12.79V
R33 right end = 12.32V (careful here, don't touch the crystal)
L15 any wire = 12.79V (there are three points on the top)
R61 upper left = 12.79V (this is the variable R)
R7 upper lead = 12.79V
Pin 8 of U2 = 12.79V
Pin 8 of U3 = 7.09V (this is a drop due to R12 and is good)
(TenTec is running the NE612 at 7V)
Pin 6 of U1 = 12.79V (be careful here)

OK, figured out where I was going with this? This pretty much covers the active components in the receiver. If the voltage disappears along this list then you have a bad solder joint or you have a shorted land or an open land (PC trace).

OK, it's about 0640UTC (Z, GMT) Wednesday. You have 8 hours to ask me to measure another point. After that it's 10 days before I see this puppy again. :-(

Good luck and may the Force be with you.

Beam me up Scottie.

dit dit

SIG

Chuck Adams K5FO adams@sgi.com DXCC=9
http://reality.sgi.com/employees/adams_dallas/

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: "Gary R. Widmayer" <grwidma@edcen.ehhs.cmich.edu>
Subject: [12535] TenTec Internet Connection

Message-ID: <330B8C75.718A@edcen.ehhs.cmich.edu>

If you are one of 100 plus people who email TenTec every day they informed me today that their internet provider connection has failed for the past few days.

They are stacking up messages waiting for the connection to be fixed so stand-by if your waiting for a message back this week.

Gary/N8AYY

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Bruce Rattray <rattray@siast.sk.ca>
Subject: [12493] VE qrp night
Message-ID: <8858450819021997/A24875/RIEL/11B29A2D3A00*@MHS>

Well last night certainly was a learning experience for me, being on the "other end" of the FOX circuit...I gained a new appreciation of the entire experience...as others have reported on other nights, propagation was not the best at all..."now you hear him, now you don't" seemed to be my typical problem trying to work stations...

...I had thought of departing from the published schedule if a band appeared to be "dead" but thought better of it just in case someone was trying to contact me and the band suddenly "opened" or the qsb "rose to the occasion"...HI HI...so I stayed with the schedule...

...so here's the log, subject to any corrections of course which I would be glad to receive via e-mail...

(1) KL7JAF - 339 - Bruce - 5 w - 14.060 - 0032Z - AK - Feb.19 - off the back -

(2) K0KWN - qsb & gone-sri- - 14.060 - 0039Z - ?

(3) VE5WF - 599 - Earl - 5 w - 14.060 - 0044Z - SK -

(4) W2TQS - 229 - Bert - - 10.116 - 0102Z - NJ -

(5) W3XG - 339 - Kris - - 10.116 - 0113Z - MD -

(6) N2TSQ - 559 - Bob - - 10.116 - 0118Z - NJ -

(7) AB5ZD - 339 - Bob - - 10.116 - 0125Z - LA -

(8) N7TC - 559 - Dave - - 10.116 - 0136Z - WA? - BAD qsb/lost him

(9) N2KKW- 599 - Bill - qro?- 10.116 - 0145Z - SC - loudest sig.

(10) K4NK - 339 - Les - - 7.037 - 0206Z - SC - qrm/qsb/etc

(11) K7TP - qrm/qsb/the black hole space vacuum got him -

(12) KC7MMA - 229 - Jack - - 7.037 - 0218Z - AZ? - really tough one/not sure

(13) KB0PAM - 559 - clobbered by qrm and gone. - 7.037 - 0235Z -

(14) N7TC - 229 - Dave - black hole vacuum agn! - 7.037 - 0242Z -

(15) AC4XG - 229 - Larry - qrm/qsb/etc - 7.037 - 0247Z - ?

(16) VE5CMA - 599 - Doug - 5 w. - 3.570 - 0315Z - SK -

(17) VE7CZW - 559 - Ernie - - 3.570 - 0354Z - BC -

Thanks to everyone for "struggling"...I'm sorry I didn't hear that many but maybe next time...I bow in a humble manner to those stations who are the foxes on a regular basis, having "walked" a little distance in your shoes...HI HI...I'll be glad to provide a qsl to anyone...73 Bruce (VE5RC) QRP-L#886
"QRP! How sweet it is!"

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: QLF@mimi@magic.itg.ti.com

Subject: [12497] VERTICAL GROUND SYSTEMS

Message-ID: <9702191537.AA06290@itg.ti.com>

From: Brad Bradfield QLF

Subj: VERTICAL GROUND SYSTEMS

I posted the following to the QRP-L last year sometime, and it was also published in the newsletter of the NWQRP club. Although I worked in the field of broadcast engineering (and particularly antennas) for many years, in all areas of question, I will always defer to the real gurus, such as those listed in the bibliography at the end.

With nothing personal intended, too many amateurs tend to base their statements too much on subjectivity ("My antenna works great!"), and too little on objectivity ("I measured X and found Y.") I remember a discussion in a forum at a hamfest a number of years ago with a well known 160 meter DX'er. He went to great lengths describing all the headaches he went through trying to make his Gamma-matched 1/4 wavelength tower load properly without the tuner at the base catching fire (actually happened!) and so on. He was doing everything seat-of-the-pants with nothing more than an SWR bridge (Yuk!) to go by, and had no idea what the real impedances and other parameters were that he was working with. When I asked him something and used the term "shunt fed" tower, he jumped back at me indicating that this was not a shunt fed tower. Well, sorry DX dude, but a grounded antenna fed like this is certainly shunt fed. In reality, a gamma-matched yagi is actually shunt fed, but this guy's mind was made up irregardless of what the real experts said. Oh, well. No objectivity. Sorry about the length, but I hope this adds something to the currently ongoing thread. Please note references to the bibliography at the end.

=====

VERTICAL GROUND SYSTEMS

Even though this isn't QRP related per se, it is a topic that continues to come up on the QRP-L and in other conversations, so let me attempt to give y'all some information to gnaw on. Ok now, everybody put away your knives, guns and flame throwers. Hand grenades are ok as long as I have time to throw them back at'cha. Keep your small (or large) thermonuclear devices at home. Antennas and related subjects are a lot like automatic transmissions; everybody has one, but very few people really understand them. It's kind of like a little bit of black magic right in your own back yard.

First off; verticals REQUIRE a low impedance ground return for PROPER operation. Now unless your vertical is installed offshore in the ocean (I've seen broadcast stations like that,) or the lawn in your back yard is actually one big sheet of copper (not with my wife!), this probably means radials.

Everybody's heard some amateur saying "My Cush-nut-Mos-Gain vertical loads fine with just a ground rod and no radials so I must not need them after all." In the words of the immortal Colonel Sherman T. Potter; "HORSE FEATHERS!" Just because it LOADS moderately well doesn't mean that the radiation efficiency is any better than an empty can of beans. You could be QRPppp without really intending to be. Ground rods are fine for DC or lightning grounds, but are typically very ineffective as RF grounds.

The following table will show the relative improvement in radiated field intensity with an increasing number of 1/4 wavelength radials. Each entry is referenced to an antenna with two radials.[1,4]

NUMBER OF RADIALS (n)	FIELD INTENSITY IMPROVEMENT (dB)

2	REF
15	2.7 dB
30	3.4 dB
60	3.9 dB
113	4.2 dB

The following table will show the relative improvement in radiated field intensity with radials of increasing length on a 1/4 wavelength vertical antenna with 113 total radials. Each entry is referenced to a radial length of 0.125 wavelength.[1,4]

LENGTH OF	FIELD INTENSITY
--------------	--------------------

RADIALS (Wavelength)	IMPROVEMENT (dB)
0.125	REF
0.25	2.1
0.375	2.5
0.412	3.8

Looking closely at these numbers, it becomes readily apparent that you rapidly approach a point of diminishing returns, beyond which additional radials or radial length is probably a waste of time and money for the amateur.

Common practice in the broadcast industry is to use 120 to 240 1/4 wavelength or longer radials, often interspersed with a number of shorter radials. They are typically #8 or #10 AWG bare copper, and are plowed into the ground. If you're building a broadcast station, you will, of course, allow enough real estate to install these radials. If you're sitting on a normal city lot, however, you won't have this luxury. In that case, install as many radials of whatever length is possible. And you can always bend them to get around objects and/or to make them longer. While any distortion in the circularity of your ground radial system will, in fact, cause some distortion in the radiated pattern of a vertical, in amateur usage, you'll probably never notice the difference.

Another interesting fact is that the field intensity improvement with an increasing number of equal length radials is more pronounced with an antenna that is physically short to begin with. Increasing the number of 0.412 wavelength radials from a quantity of two to a quantity of 113 gives the following results at various antenna heights.[4]

HEIGHT OF TOWER (Wavelength)	FIELD INTENSITY IMPROVEMENT (dB)
30	7.38
60	4.58
90	3.82

Ground losses increase rapidly with frequency. The higher the frequency, the more ground system required to minimize losses. That's why you'll never see a VHF or UHF ground mounted vertical with buried radials. This is obviously an extreme example, but true. At frequencies up into the 7-10 MHz range, a ground mounted vertical with buried radials will work very well. While ground mounted verticals with radials are commonly used in the amateur service as high as 28 MHz, an elevated vertical with a counterpoise or metal ground plane will be a more efficient radiator above the 7-10 MHz range.[1]

I can find no hard data on the relative efficiency of insulated versus bare wire for buried radial systems. I've used the insulated stuff myself, so know it works, but don't know anything about the relative merit of one over the other.

I won't go into any one method of burying radials. Everyone has his own trick or can come up with one. At HF, any depth beyond 2-3 inches is not required. Terminate your radials around the base of your vertical by soldering them to a copper bus strap or heavy copper wire. If you're shunt feeding your vertical, a heavy bus strap or wire is required between this radial termination and the tuner ground, as heavy currents will flow at this point.[1] Even if you intend to operate only at QRP power levels, the loss at this point needs to be minimized. Actual wire size of the radials is not of great importance. They should be of a large enough size to survive whatever method of installation you choose.

BIBLIOGRAPHY

For more information, read the following:

- 1) The Amateur Radio Vertical Antenna Handbook by CAPT Paul Lee, N6PL
CQ Publishing, Inc
[Outstanding reference, but may or may not be still in print]
- 2) The Complete Broadcast Antenna Handbook by John E. Cunningham
TAB Books
[Out of print?]
- 3) Antenna Engineering Handbook by Johnson and Jasik
McGraw-Hill, 2nd Edition
Chapter 25
[Expensive! >\$100]
- 4) Ground Systems as a Factor in Antenna Efficiency by Brown, Lewis and Epstein
Proc. of the I.R.E., June 1937
[This is probably the best classical work on ground radial systems, and is still regularly quoted today. Find a library that has it.]
- 5) The ARRL Antenna Book
15th Edition, 1988
Pages 3-13,14 and 8-22,23
- 6) Radio Antenna Engineering
1952
Edmund A. Laporte
- 7) Broadcast Engineering Handbook

National Association of Broadcasters

8) Radio Handbook
22nd Edition
Bill Orr, W6SAI
Chapter 24

This list is certainly not all inclusive, it is simply what I commonly have on the reference shelf at my desk. Another excellent reference is the articles written by Jerry Sevick, W2FMI, in OST in July 1971 and March 1973.

72's es 73's,

Brad, WB0CGH

Brad Bradfield, PE Electrical Design Engineer
(H) 817-321-2960 Texas Instruments, Inc.
(W) 972-462-6230 (Soon to be: Raytheon/TI Systems)
Real men talk with their fingers!

QLF@MSG.TI.COM

WB0CGH@W05H.#DFW.TX.USA.NA

ARRL Life Member QRP-L #377 SMIRK #4906 IEEE (M) ARS #72

Collector of wireless and landline Morse keys and accessories.

From owner-grp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: QLF%mimi@magic.itg.ti.com

Subject: [12529] VERTICAL GROUND SYSTEMS (Again)

Message-ID: <9702192050.AA05569@itg.ti.com>

From: Brad Bradfield QLF

Subj: VERTICAL GROUND SYSTEMS (Again)

Hi y'all. Me again.

I agree wholeheartedly with the comments from W0DN posted by WD4LUJ.

```
>most out of them.  Guess that's why FCC specifies 113 wires each .4
>wavelength for AM BC stns -- the equivalent of a zero-loss gnd plane,
>tho for most ham work that would be overkill in excess.  Bare wire,
>insulated, any gauge, it doesn't matter.  The current coming back
>along any one wire won't amount to that much.
```

Actually, the FCC requires a *minimum* of 90 radials, each at least 1/4 wavelength long. However, they really recommend at least 120 radials of 0.35 to 0.4 wavelength long. A fairly common broadcast ground radial system employs 120 radials of 0.35 to 0.4 wavelength long, interspersed with an additional 120 radials of 0.1 to 0.2 wavelength. I've seen broadcast ground systems in swamps and crossing creeks and rivers. They can all be made to work. Back in the 60's, an AM station in NY or NJ (I think) was having a terrible time with vandals pulling up their ground radials to sell them as scrap copper. After losing more than one set of radials this way, they finally installed a set made from common steel barbed wire laying on the surface of the ground. The 113 quantity mentioned above by W0DN comes from the 1937 IRE article by Brown, Lewis and Epstein listed in the bibliography to my earlier post. Even though this article is 60 years old, it is still recognized as one of the definitive works on vertical antenna ground systems.

72's es 73's,

Brad, WB0CGH

```
*****
Brad Bradfield, PE                               Electrical Design Engineer
(H) 817-321-2960                                Texas Instruments, Inc.
(W) 972-462-6230                                (Soon to be: Raytheon/TI Systems)
                                                Real men talk with their fingers!
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ARRL Life Member QRP-L #377 SMIRK #4906 IEEE(M) ARS #72
Collector of wireless and landline Morse keys and accessories.

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Joe Gervais <vole@primenet.com>
Subject: [12536] VT FSFD - MIA?
Message-ID: <199702192326.QAA23094@usr09.primenet.com>

Howdy Folks,

Has anyone heard the VT FSFD "Fox" today? It's 2326 UTC and I've been listening for him on 20m. Band seems open, but no W1EAT in sight. :-)

VT's my last state for QRP WAS. Please tell me he's out there! Help me Obi-wan, you're my only hope! :-)

Cheers de AB7TT,

-Joe, vole@primenet.com, AZ ScQRPions (Phoenix)

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: gsurrency@juno.com (Gary L Surrency)
Subject: [12505] Web Pictures
Message-ID: <19970219.103002.10262.1.gsurrency@juno.com>

Chuck,

I really enjoy and appreciate the photos you have put up on your website of the various rigs, in particular the recent addition of the OHR100 rig. It certainly makes determinig the value of a kit an easier decision.

Thanks again. It's a great service and I commend you and your efforts.

73,

Gary Surrency AB7MY
S&S TAC-1(40&80m) and ARK30, AT-11 (QRO and QRP)
QRP-L #571 Chandler, AZ (near Phoenix)Grid Square DM43BH
Az ScQRPions

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Brian Cieslak <brianc@ams-i.com>
Subject: [12517] What is the 5W mod for the 38S.
Message-ID: <c=US%a=_%p=Adaptive_Micro_S%l=AMS-I_SERVER_1-970219190856Z-150@ams-i-server-1.ams-i.com>

Could someone forward the mod to make the 38s 5w....that one seemed to slip by me.

Brian AE9K

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Mike P <73571.3404@compuserve.com>
Subject: [12446] WTB:QRPP vol4 number 1
Message-ID: <970219013349_73571.3404_FHD60-1@CompuServe.COM>

I am looking for issue one in vol four of QRPp magazine. The group does not sell individual issues. I hope someone can help. Thanks Mike Paskeuric
N00DK 73

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: mike wood <K6MW@server.worldinfonet.com>
Subject: [12475] [Fwd:]
Message-ID: <330A9923.7969@server.worldinfonet.com>

Lorraine Y Aubert wrote:

>
> Hello All!
> Name here is Lorraine, AC6XK, and I've been lurking here on QRP-L for
> several weeks now. I will be working the FYBO contest from the San
> Jacinto Mountains in Southern California at about 8500 ft. I'm camping in the
snow and will be bundled up in my down sleeping bag (with fleece
> liner) and my Norcal 40A transceiver. I hope to work many of you and
> Good Luck to everyone!!
>
> Lorraine Y. Aubert
> AC6XK LYA@juno.com

Check out some of Lorraines accomplishments in the Feb QST...Pg 60
Appears there is a new gun in town...

73, mike-

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Ed Tanton <n4xy@avana.net>
Subject: [12455] Re: 1/2 turn on toroid
Message-ID: <3.0.1.32.19970218220340.00993ea0@tiger.avana.net>

OOPS! I forgot about that self shielding business Kack-that would make
doing anything else (besides your drilled hole) very difficult-if not
simply impossible. A carbide PC drill ought to do a nice job of it. Thanks.
72/73

Ed Tanton N4XY EMAIL: n4xy@avana.net TEL: (770)579-3933 V/MBX/FAX
189 Pioneer Trail

Marietta, GA 30068-3466

QRP-ARCI#7663 G-QRP#6779 OK-QRP#172 QRP-L#758 AdvRC#140
NORCAL#1779 NCDXF SEDXC

Life Member: ARRL AMSAT IDRA INDEXA QCWA
URL: Coming Sooner or Later

"Think you can, think you can't: either way you're right!" Henry Ford

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: "j.w. thornton" <dub@oklahoma.net>
Subject: [12508] re 1/2 Turn:
Message-ID: <3.0.32.19970219103452.00b414a0@okc.oklahoma.net>

I missed the original intent or purpose of the half turn thingee. Why are we looking for this in the first place, since inductance can be changed to a certain degree by squeezing/spreading turns.

What I remember from some of the "ole time" builders (Doug Demaw era), is that you simply count the number of turns that pass THRU the hole of the toroid.

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: "J. Skalski" <jskalski@acsu.buffalo.edu>
Subject: [12449] Re: 1/2 turn: my attempt.
Message-ID: <Pine.GS0.3.95.970218204812.27463A-100000@destrier.acsu.buffalo.edu>

How about squeezing some turns together to change the inductance?

73,

Jim N2GO
The Buffalo QRP CONNECTION
ARCI #9013 QRP-L #381
Life member ARRL
jskalski@acsu.Buffalo.EDU

On Tue, 18 Feb 1997, ukii wrote:

> Well, not being an authority on anything, I will guess about this
> 1/2 turn toroid thing...

> Seems to me that since toroids have some kinda magnetic field,if you wind
> 2 turns or so,and have them wind back over the first ones,wouldnt that
> nullify or cancel some of the first turn's inductance and leave
> you with what would be the equivalent of a half turn???
> Ok,go and correct me,I know this is probably WAY off base...
> 73 de john
> n9ukx
>
>

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Glen Leinweber <leinwebe@mcmail.CIS.McMaster.CA>
Subject: [12499] Re: 38 Special
Message-ID: <1997Feb19.110123-0500@[130.113.234.7]>

In <19970218.214524.4463.3.kb0rol@juno.com>, Bradley L Mugleston wrote:
>I have a few questions - my board has locations for two R20 resistors but
>only one is called for - which location should I use? One location is by
>the U201 Keyer the other is above the U5 - NE5532 chip.
>
>Also for D7 there are three possible holes to put the two leads - one is
>just outside the diagram of the diode the other is just inside the
>diagram?
>

Brad,

If you look REAL close, one of those is actually labelled "R201"
The "1" got overlaid by the box that represents the resistor contour.
I'd say that the one close to the keyer is actually "R201". The REAL
R20 is tucked next to the NE5532 chip.

Most resistors & diodes have a lead spacing of 0.4". So if you measure,
you'll find that D7 goes to the hole just outside the silkscreen
diagram. The hole inside is called a "via" and is used to make a
connection from topside to bottomside. No connections will be made
to this hole, so don't worry that D7 lays over it. There will be many
of these "via" pads with no connections when you're finished.

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: NilsBull@aol.com
Subject: [12444] Re: 40m 38 Special not quite finished
Message-ID: <970218201204_1381921779@emout15.mail.aol.com>

In a message dated 97-02-17 10:25:38 EST, Dan_Tayloe-P26412@email.mot.com (Dan Tayloe-P26412) writes: "Just a few more fixes....."

Yeah, that's what I say just before the 8 cups of coffee kick in and it's suddenly 2 a.m. and Cindy wants to crash and I'm sitting there with a table full of screws and screwed up circuit board.

Only takes about one can of cat food headed for my frontal lobe before I call it quits and give up for a while. Glad she does that too. Can you imagine how many hatchet marks there'd be on the desk if she didn't?

And yes, I was sitting here doing the math for a different mixer scheme when it dawned on me that someone had probably already done that. And next week I discover fire, right?

73

Nils

WB8IJN +c

. . . Ian (oldest son) just came over and played with my web page mock up. Said it didn't suck up enough bandwidth. Seems that's the rage these days. Guess I'll have to put in a full-motion video of a Miehle flat-bed newspaper press running. Or a flick on one casting cycle of the Intertype before I sell it off. Yeah, that's enough b/w.

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: tahrens1@juno.com
Subject: [12460] Re: 40m 38 Special not quite finished
Message-ID: <19970218.215524.4895.1.tahrens1@juno.com>

0000H BOY, Nils is gonna have a web page.. gotta see them badgers in the act too!!

Tim W5FN

>73

>Nils

>WB8IJN +c

>. . . Ian (oldest son) just came over and played with my web page mock up.

>Said it didn't suck up enough bandwidth. Seems that's the rage these days.

>Guess I'll have to put in a full-motion video of a Miehle flat-bed newspaper

>press running. Or a flick on one casting cycle of the Intertype before

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Ed Tanton <n4xy@avana.net>
Subject: [12466] Re: An open letter to anti-QRP ops...
Message-ID: <3.0.1.32.19970218233136.0097ec50@tiger.avana.net>

I admit I have not read 'the' letter-but I have bumped into the attitude-in one form or another-many times. There is a simple reply: if you don't want to work me at whatever my signal level is at your station, please don't.

I'm not rare-so you probably do not need my prefix; I'm not persistent to the point of annoyance-so I doubt I'll bother you; I'm simply interested in having fun with amateur radio using my own particular set of operating parameters. They do not apply to you. Have your own kind of fun, using your own set of parameters.

All I ask is: that you not be rude; that you not break the law; and that you do not tell me what my parameters ought to be-or what's wrong with what I think is fun. There's lots of frequencies, and lots of times to use them-with room and times enough for all of us. Have your own fun... and if mine does not appeal to you: fine. I will try and not stop on your toes, and please do not step on mine.
72/73

Ed Tanton N4XY EMAIL: n4xy@avana.net TEL: (770)579-3933 V/MBX/FAX
189 Pioneer Trail
Marietta, GA 30068-3466

QRP-ARCI#7663 G-QRP#6779 OK-QRP#172 QRP-L#758 AdvRC#140
NORCAL#1779 NCDXF SEDXC

Life Member: ARRL AMSAT IDRA INDEXA QCWA
URL: Coming Sooner or Later

"Think you can, think you can't: either way you're right!" Henry Ford

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Bill Todd <bill@techline.com>
Subject: [12471] Re: An open letter to anti-QRP ops...
Message-ID: <1.5.4.32.19970219053923.006604bc@mail.techline.com>

>I admit I have not read 'the' letter-but I have bumped into the attitude-in

>one form or another-many times. There is a simple reply: if you don't want
>to work me at whatever my signal level is at your station, please don't.

>All I ask is: that you not be rude; that you not break the law; and that
>you do not tell me what my parameters ought to be-or what's wrong with what
>I think is fun. There's lots of frequencies, and lots of times to use
>them-with room and times enough for all of us. Have your own fun... and if
>mine does not appeal to you: fine. I will try and not step on your toes,
>and please do not step on mine.

>Ed Tanton N4XY

Ed -

That was a great letter, and it ALSO deserves to be read in QST!

An earlier writer on the list was right when he mentioned the ARRL's support of QRP. I think the letter might be an attempt by the QST editors to mollify some of the QROers who might feel "threatened" by QRP (because we seem to be having such a good time with our aspect of the hobby.

CUL, Bill--N7MFB
time).

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: NilsBull@aol.com
Subject: [12443] Re: another theory to ponder: (HI)
Message-ID: <970218201142_-938734933@emout18.mail.aol.com>

In a message dated 97-02-16 19:06:42 EST, W.Kimura@valley.net ("W. Kimura".) writes: "I look forward to peer review and validation of this exciting and illuminating phenomenon."

And the dissertation review committee will be available before the defense so that all those grad students wanting to suck up to the committee will be able to do so.

By the way, goud splieling dose hlep wehn the comittee is lookin gat what wone caligue calls "the steaming pile." I giness ilts jist pardof the phenomenology of the scene.

Medication time... which remembers me that I had a neat talk today with a guy in the psych department whose special field is "narrative psych," which means I gotta find this guys office and bother the hell out of him for a while. He might end up on my review committee some day.

"Can I get you some coffee? Open a window? Pay for the postage on your recently rejected article? Lick your shoes? Sleep in an ashtray with two dead cockroaches? So you're on my committee, eh? How about if I polish your shoes with my tongue, clean the desk with my own toothbrush and buy you a big steak across the street at the fancy restaurant? Oh, vegetarian, eh? Well, how about if I just hang myself by my thumbs and get this over with so I can go home and realize that all this education ain't gonna get me one cent closer to solvent. Oh, yes, you're right. I should drink some solvent. Like Horacio Quiroga's wife, eh? Yes, I'll be glad to translate your dissertation into Hungarian and Welsh. And send it around to academic publishers. For free even, ok?" (Sounds of sniveling and boot licking...)

73

Nils

WB8IJN

... I don't understand this crap. It's like that ol' Martin Mull song, "Licks off of records that I've heard..."

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: LDG Electronics <ldg@radix.net>

Subject: [12109] Re: AT-11 Hint

Message-ID: <l03010d02af2bf2781cd6@[206.62.179.112]>

I've noticed that a lot of builder have been having problems with the 14 pin header on the AT-11. Here's what I found out.

There is a problem with the PC board hole size for J3 and D20. We switched

<--- end extracted message

Ladies and gentlemen trying to insert a connector into the AT-11 board:

>From experience along time ago, I learned to never twist anything in a hole of a plated through board. The plating may disconnect and come out. It was worse with multi-layer boards. The best solution I have read on the reflector is to position the connector as close as possible to the board WITHOUT forcing it in, and solder from the top. Add a tiny amount a solder to the bottom of the board after.

Just my two cents. When I built mine, I made a wire harness and soldered it directly into the board.

Douglas L. Datwyler WR70 Sandy, UT DN40
datwyler@aros.net

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: "KA5T Larry Wise" <lewise@inetport.com>
Subject: [12519] Re: Connectors
Message-ID: <199702191909.NAA27181@admin.inetport.com>

Hi Gang:

For years (and still I guess) I had(have) one or two short pieces of RG58 coax (1 to 4 ft long) which will forever be referred to as HeathKit cables. These had a PL259 on one end and an RCA plug on the other end.

Why??.... Youall know why,... Heath used RCA connectors on lots if not all of their gear for years and years....

Sure you need a SO whatever, the double ended female connector... and I finally learned to keep several in the Crisco can connector safe!! (Of course today you can find those female whatever 239 for cable ends fairly easily...and you could eliminate these.)

I prefer the piece of coax with proper connectors to adapters for the smaller rigs. This little RadioKit QRP-40 is 4 x 4 1/4 x 1 3/4 inches and probably weighs less than a pound. Can't you just see a BNC connector on the back with a BNC to UHF adapter and then some coax??? You'll neet to take along a real brick to set on top of it to keep it still!!....

Anyway you usually need to connect in a SWR meter or Power meter or tuner and so it fits right in.....

Larry

KA5T Larry Wise Georgetown, Texas lewise@inetport.com QRP-L 89 ex K80SG
W6HED W4ZTB

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: gsurrency@juno.com (Gary L Surrency)
Subject: [12506] Re: Connectors (LONG)
Message-ID: <19970219.103002.10262.2.gsurrency@juno.com>

Gang,

While I agree with Bob that the UHF to BNC adapter is more rugged than the BNC to UHF adapter, I disagree that the UHF connector alone is more rugged than the BNC connector, except on RG-8 or RG-213, 9913, etc. It's another story on the smaller cables.

I have had several UHF small coax failures, since the jacket is NOT secured to the connector on the smaller cable types, such as RG-59 or RG-58. RG-8 connections seem to be pretty tough, since the body of the PL-259 actually threads onto the cable's outer jacket, making for a good strain resistant mechanical joint. The smaller cable isn't secured this well, and I have had rotation occur in the UG-175 or UG-176 adapter that allowed the shield and / or center conductor to separate.

I currently have been having better luck with the UG adapters for UHF connectors by folding the shield back over the end of the adapter, holding it tightly against the outside of the end of the adapter with a piece of small bus wire twisted around the braid. I then sweat solder the entire braid to the adapter with a fairly large solder iron, and then remove the small bus wire that was wrapped around the shield strands. I trim any un-even shield wires with a sharp knife, scraping the solder and wires together down to the UG adapter surface.

To make this work right, you need to either use silver-plated UG-175, UG-176 adapters, or pre-tin the more common nickel plated ones, since they do not solder well and will cause you to use too much heat to tin the adapter and solder the shield to it simultaneously.

Be sure to use low melting point solder, such as 63/37 alloy, as it melts at a much lower temperature than the other alloys, and it also has nearly no plastic state when solidifying from the liquid state. Pull the shield away from the coax's center insulator at the end of the connector before soldering to minimize melting the insulation into the shield as you solder the braid to the adaptor surface. Cool the finished adaptor on your wet soldering iron sponge before you handle it.

This method beats the heck out of the "solder the braid thru the holes in the PL-259 body" method. It has the added advantage that the ENTIRE coax shield is soldered to the adaptor, making for a much stronger and better electrical connection.

It also has the advantage that the connector is much easier

to dis-assemble and re-use. I cut the cable about two inches from the connector and un-screw the adaptor out of the PL-259. The center conductor and insulation will remain in the connector to be removed with a brief application of the soldering iron.

Try that with the "official" assembly method recommend for the UG type adapters! The only thing to be careful about, is you should tightly screw the adapter into the PL-259 after you prepare it, so it doesn't become loose in use (!) and cause failure of the center conductor connection.

Using BNCs, I always prefer the solder and clamp type fitting, since the gland nut with its compression washer tightly grips the outer jacket, making for a water-tight and mechanically secure joint. I have never had one of these fittings fail. The smaller size of the BNC connector also puts less strain on the end of the cable when handling coax path cables, and it also protrudes less than the PL-259 / UG-175, UG-176 connections.

On small radios for QRP like many of us use, the BNC adds much less depth and weight to the wattmeters and transceivers. As a result, your radio gear tends to stay put better and take up less room on the operating desk. It's not quite as bad as having a big piece of RG-8 hooked to the back of your QRP rig, but the PL-259 sure looks and feels like overkill when making attachments to your itty bitty rig. :-)

Bob is correct about the UHF to BNC adapter being much more rugged than the reverse, a BNC to UHF adapter. I use a bunch of those around my shack to accomodate various mis-fitting cables. The solution I have come up with that works very well for me, is I use a cable with a PL-259 on one end and a BNC on the opposite end of the same patch cable to make the adaptation between dissimilar connectors. But that would not be necessary if all my gear were BNCs to begin with! An OHR WM-1 with BNCs, pretty please!

There is something about a 4 hole BNC chassis connector that appeals to me for QRP gear. I don't like the threaded type chassis mount, but I have come to accept the PCB mount BNC jacks of my S&S gear as an acceptable alternative.

The difference in the UHF not being a constant impedance type connector like the BNC is, is not much of a concern at HF frequencies, so the preference for BNCs is merely one of appearance and security over the less rugged UHF type. Current trends toward commercial radios becoming smaller and smaller as the ICOM 706 demonstrates, make me wish for BNCs as standard equipment.

The only shortcoming I find with BNCs, is the female center contact seems to suffer a bit with extended use, like on your HT when you change antennas a lot. I use a straight pin to pry the contacts toward the center-line of the connector when the split contacts become wallowed out.

I hope this helps anyone who dreads UHF / UG connector assembly. Try it and let me know what you think.

73/72,

Gary Surrency AB7MY
S&S TAC-1(40&80m) and ARK30, AT-11 (QRO and QRP)
QRP-L #571 Chandler, AZ (near Phoenix)Grid Square DM43BH
Az ScQRPions

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: "KA5T Larry Wise" <lewise@inetport.com>
Subject: [12518] Re: Correspondence - Why QRP
Message-ID: <199702191909.NAA27189@admin.inetport.com>

Ken Evans Wrote:

>...
>station, I am available for a schedule on any band from 160 through 10
>meters, sideband or CW. Or simply turn the power down on your rig and see
>just what the results can be.
>>>
>>>Ken Evans
>>>W4DU - Atlanta, Georgia
>>>W4DU@bellsouth.net

What a nice measured, positive response, huh Gang????
Larry

KA5T Larry Wise Georgetown, Texas lewise@inetport.com QRP-L 89 ex K80SG
W6HED W4ZTB

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: adams@chuck.dallas.sgi.com (Chuck Adams)
Subject: [12459] Re: Debugger #1 Day 3
Message-ID: <199702190350.DAA12392@chuck.dallas.sgi.com>

Larry et.al.,

Talk about timing? Hmmm. I just got email from a guy on the Internet that saw my home page. He liked the pics of the insides of the rigs etc.

But he happened to mention that some years ago he built a kit that never worked. He just got it back out and was going to send it to the landfill. I immediately sent him email that he is to ship it to me. This will be rig #2 to ship around to the team after rig #1 gets done. :-) We could set up a perpetual debugging contest for all the rigs that never ever worked. :-)

Oh, did I mention that it was a RadioKit? I knew you knew that we all knew that we knew it was.....

Film at 11
FYI

Back to your regularly scheduled program in progress. When more news comes into the newsroom you'll be the first to know.

..
SIG

Chuck Adams K5FO adams@sgi.com DXCC=9
http://reality.sgi.com/employees/adams_dallas/

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: Joe Gervais <vole@primenet.com>
Subject: [12502] Re: Debugger #1 Day 3
Message-ID: <199702191722.KAA04234@usr03.primenet.com>

Larry (KA5T) wrote:

> The badgers are making cheeping noises and casting mean
> looks my way, but no power on yet...
> Zounds Jeeves, whats taking so long???
> ...
> After pizza and wine I'm going to finish that section if I don't
> fall asleep...

Uh... Think I may have found the problem here. Just *how* much wine are you drinking before picking up the iron, Larry? :-)

> Lets see... If I get this working by Saturday (end of day seven) do I
> get to use it for FYBO????? Hmmmmm...

Sounds like bonus points to me. :-)

Cheers de AB7TT (ex-KC7NEV),

-Joe, vole@primenet.com, AZ ScQRPions (Phoenix)

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997
From: mdwatt@usit.net (Marty Watt)
Subject: [12462] Re: Dumb Dummy Qestion
Message-ID: <330b46ba.99541204@smtp.usit.net>

On Tue, 18 Feb 1997 06:37:33 GMT, mdwatt@usit.net (Marty Watt)
wrote:

>Dan, N7VE, remarked that the power would be the sum of the power
>ratings individually (in parallel). I would assume that series
>resistance power ratings would be that of the lowest resistor in the
>series?

I have gotten an interesting varitey of responses to this query.

Some say the lowest power rating would be the max input. Others say
the power capability is multiplied for resistors in series (i.e., 2
10W resistors in series could handle 20 watts, 4 10W resistors could
handle 40 watts, etc.).

This question appears moderately important, and I think the list
would benefit from a public discussion, given the variety of
responses.

RS does sell an 8 Ohm, non-inductive, 20W resistor. If I put 6 of
these in series, does that mean it would handle 20W or 120W? 10W or
60W (half of calculated power under the various methods)?

72 es 73 de=20
Marty, KM7W (x-KN4BH)

Jackson, Tennessee

e-mail: mdwatt@usit.net
<http://www.public.usit.net/mdwatt>
"The Curmudgeon's Corner"

ARRL VE - QRP ARCI #7514 - QRP-L #953 - AK/QRP #098 - Grid Sq EM55oq
~~~~~

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: Vic Rosenthal <rakefet@rakefet.com>  
Subject: [12467] Re: Dumb Dummy Qestion  
Message-ID: <330A847F.366C@rakefet.com>

Marty Watt wrote:

> RS does sell an 8 Ohm, non-inductive, 20W resistor. If I put 6 of  
> these in series, does that mean it would handle 20W or 120W? 10W or  
> 60W (half of calculated power under the various methods)?

Since the resistors are in series, the same current would have to flow through all of them. Call this current I. Then each resistor would dissipate  $I * I * 8$  ( $P = I\text{-square times } R$ ). If current happened to be 1.58 amps or so, each resistor would dissipate 20 watts, and the whole string would be dissipating 120 watts.

Vic K2VCO

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: adams@chuck.dallas.sgi.com (Chuck Adams)  
Subject: [12474] Re: Dumb Dummy Qestion  
Message-ID: <199702190604.GAA12625@chuck.dallas.sgi.com>

Jackson et.al.,

Ohms law makes this simple.

8 ohm 20W resistors. 6 resistors in series.

$R(\text{total}) = R1 + R2 + R3 + R4 + R5 + R6$   
 $R(\text{total}) = 48 \text{ ohms}$

Let the current be  $I = 1.5 \text{ amperes}$

$P(\text{total}) = R(\text{total}) \times I \times I$   
 $= 48 \text{ ohms} \times 1.5A \times 1.5A$   
 $= 108W$

$P(1) = 8\text{ohm} \times 1.5A \times 1.5A = 18W$

$P(2) = 18W$

$P(3) = P(4) = P(5) = P(6) = 18W$

$$P(1)+P(2)+\dots+P(6)= 8 \times 18W = 108W$$

So each resistor is still within its power dissipation limits. We can get into a detailed discussion of convection air currents and power dissipation reduction, but that is for another time.

Someone mentioned the excellent idea of using PC boards with resistors paralleled in between but there may be a problem with too many too close together for air flow in some cases.

The above math for the series case. Similar work for parallel resistors will show that as long as the voltage/current/resistance values per resistor show a power level less than the rated value things should work just swell.

FYI

cc: qrp

SIG

Chuck Adams K5FO            adams@sgi.com DXCC=9  
[http://reality.sgi.com/employees/adams\\_dallas/](http://reality.sgi.com/employees/adams_dallas/)

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: "Michael A. Gipe" <mgipe@reliablemeters.com>  
Subject: [12503] Re: Dumb Dummy Question  
Message-ID: <199702191726.LAA02101@multi13.netcomi.com>

For the series resistor connection:

Given a series connection of EQUAL valued resistors, the power dissipated is shared EQUALLY among them.

Given a series connection of UNEQUAL valued resistors, the power dissipated in EACH resistor is proportional to its resistance. ( $I^2R$ , where  $I^2$  is the same for all elements in a series circuit.)

Thus, a series combination of ten 5 ohm 1-watt resistors would be rated ten watts.

A 10 ohm 1-watt resistor and a 20 ohm 1-watt resistor in series would together be rated 1.5 watts. In this case, the limit is determined by the 20 ohm resistor; the 10 ohm resistor runs cooler at half the power dissipation.

Don't forget that you should not expect a resistor to be happy dissipating its full power rating. It will get hot enough to burn a circuit board. Improving the rate of heat transfer away from the resistors improves the power handling capability of the dummy load. The usual ways to do this are large heat sinks and heat-conducting fluids (oil).

Since most leaded 'non-inductive' resistors are slightly inductive at HF frequencies, the best combination of resistors for an HF dummy load is a parallel arrangement, which reduces the inductance proportionally to the number of resistors. (Remember calculating parallel inductance?) This serendipitous result can be nullified if the connections to the resistors have too much inductance, so use wide, short connections.

For a good dummy load:

Obtain a number of equal-valued non-inductive resistors. Mount them with minimum length leads between two slabs of PC board material (low inductance interconnection). Space the resistors apart about half a resistor diameter. Use short copper strap to connect them to a coax connector. Mount the whole assembly inside an empty paint can (You can purchase unused paint cans from a paint store). Mount the coax connector to the lid. Fill the can with mineral oil (Helps conduct the heat away from the resistors).

Mike K1MG

-----  
> From: Marty Watt <mdwatt@usit.net>  
> To: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>  
> Subject: Re: Dumb Dummy Qestion  
> Date: Tuesday, February 18, 1997 8:01 PM  
>  
> On Tue, 18 Feb 1997 06:37:33 GMT, mdwatt@usit.net (Marty Watt)  
> wrote:  
>  
> >Dan, N7VE, remarked that the power would be the sum of the power  
> >ratings individually (in parallel). I would assume that series  
> >resistance power ratings would be that of the lowest resistor in the  
> >series?  
>  
> I have gotten an interesting varitey of responses to this query.

>  
> Some say the lowest power rating would be the max input. Others say  
> the power capability is multiplied for resistors in series (i.e., 2  
> 10W resistors in series could handle 20 watts, 4 10W resistors could  
> handle 40 watts, etc.).  
>  
> This question appears moderately important, and I think the list  
> would benefit from a public discussion, given the variety of  
> responses.  
>  
> RS does sell an 8 Ohm, non-inductive, 20W resistor. If I put 6 of  
> these in series, does that mean it would handle 20W or 120W? 10W or  
> 60W (half of calculated power under the various methods)?  
>  
>  
> 72 es 73 de  
> Marty, KM7W (x-KN4BH)  
>  
> -----  
> Jackson, Tennessee e-mail: mdwatt@usit.net  
> http://www.public.usit.net/mdwatt  
> "The Curmudgeon's Corner"  
> ARRL VE - QRP ARCI #7514 - QRP-L #953 - AK/QRP #098 - Grid Sq EM55oq  
> ~~~~~  
>

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: "Michael A. Gipe" <mgipe@reliablemeters.com>  
Subject: [12523] Re: Dumb Dummy Question  
Message-ID: <199702192014.0AA26713@multi13.netcomi.com>

Marty --

You wrote:

>.... Thanks for the response  
>... What I'm essentially trying to do is build a  
>small dummy load to throw in my case. It will be QRP, and hopefully  
>rated to around 20W continuous duty. I'd like to fit it in a 2x2x2  
>cube, so the number/size of the resistors and room for parallel  
>placement becomes more critical than the type of resistor available.  
>....

For your application, I would recommend you take a look at some  
non-inductive resistors from Caddock. They have a line of non-inductive  
power resistors in T0220 cases which make it very easy to tie on a  
heatsink. They are a very good product from a good company. I use some of



their products in several of my commercial designs.

Look at the MP916 and MP930 series. You could probably bolt them to an aluminum heat sink or metal case and only derate them about 50% for continuous operation.

Check out <http://www.caddock.com>

Mike K1MG

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: john andrews <jm165723@eee.org>

Subject: [12458] Re: ECG conversions

Message-ID: <330A7875.A64@eee.org>

john andrews wrote:

>

> KA5T Larry Wise wrote:

> >

> > Anyone know if the device conversion database for ECG is

> > on line somewhere??

> > KA5T - Larry Wise - Georgetown, Texas - lewise@inetport.com QRP-L 89

> > ex: KN80SG K80SG(1959-1967 MI) W6HED(1967-1968 Ca) W4ZTB(1968-1978 Fl)

>

> hi Larry:

>

> Dunno if on-line is available but the quick-cross is downloadable;

>

> <http://www.nzteinc.com>

>

> Watching your posts with interest. Have 3-4 of the boards(QRP-15)

> waiting the 3/400 holes to be drilled. It's a "Moby" project.

>

> 72, John- N5INZ

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997

From: Joe Gervais <vole@primenet.com>

Subject: [12442] Re: Fox report KA5DVS

Message-ID: <199702190057.RAA06143@usr02.primenet.com>

Vic (K2VC0), a CA Fox Hunter, wrote:

> Aaargh! The &\*%\$ XE station started calling CQ right after we made  
> 'contact'! A few moments later, the 599+10 RTTY opened up, and that was  
> all she wrote. And I'm in CA, too. It would have turned the tide....

Hmmm... wasn't a Texas RTTY signal, was it? :-) :-)

(Hey, double smileys protect me from any flames, right?)

Cheers de AB7TT (ex-KC7NEV),

-Joe, vole@primenet.com, AZ ScQRPions (Phoenix)

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: Dale LeDoux <dledoux@laci.net>  
Subject: [12463] Re: Half turns? Kinda long...  
Message-ID: <1.5.4.16.19970218220539.27d742ce@laci.net>

At 10:17 2/18/97 -0500, you wrote:

>Hi folks,

>>From the 1995 Handbook, page 25.24:

>

>"The Half-Turn Problem

>

> When you wind toroids, remember that  
>sticking the wire through the core counts  
>as "one-half turn." Wrapping the wire  
>around the core and passing it back  
>through the core is one and a half turns.  
>You can count the number of turns by  
>counting the number of times the wire  
>passes through the center of the coil. For  
>an integral number turns, the leads must  
>leave the core on the same side. See Fig  
>25.35A."

>

>Sounds to me that if you just staple the core  
>to the board, you would have one-half turn.

>(3/4?)

>What say ye, Zack?

>

>72/73 Stew KE4YH

>Dunedin, Florida Spring Training home of the Toronto Blue Jays

>

>

Doesn't sound right to me. A toroid is just a core for a transformer or inductor. One pass of the conductor through the 'window' of the toroid is

one turn. We do this all the time in the power industry with current transformers.

I have 'proven' this to engineers several times that it doesn't make a lot of difference if the conductor proceeds straight in one side of the toroid and out the other with both sides of the conductor taut and straight on either side for several feet or if it is wrapped around the outside of the core making a complete loop.

If I need to cut the ratio between the primary winding (which goes through the window) to the secondary (which is wound around the core, typically from 10 to 600 turns, then I loop the conductor through the window again, and again, it doesn't matter where the wire goes after it leaves the window, as long as it doesn't pass through it. At least that's the way it works at 60 Hz with high-silicon iron ribbon-wound toroids with current magnitudes up to several thousand amps going through the window and with 5 amps in the secondary. Incidentally, these things I describe deal with voltages from 480 to several thousand. Above 15 KV we do things a bit differently.

I suppose that there might be some immeasurable difference here, but it ratios out with the equipment we use in this industry. Perhaps at higher frequencies there might be some sort of case to be made for flux leakage and loss of capability for energy transfer, but one turn simply means that the conductor in question goes through the window once.

Dale LeDoux  
Sulphur, Louisiana  
Bath Electrical Systems  
Power Specialists -- 480 V to 230 KV  
KD5QI -- QRP-L #602

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: "David D. Meacham" <ddm@datatamers.com>  
Subject: [12512] Re: Half turns? Kinda long...  
Message-ID: <Pine.LNX.3.91.970219100350.7811B-100000@dt1.datatamers.com>

Dale,  
You are absolutely correct. With high-frequency current transformers, however, failure to center the turn(s) may cause errors of a fraction of a percent or so. (I was a transformer designer for 17 years.)  
72, Dave, W6EMD

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: "David Kreinberg" <kreinbd@ccgate.dl.nec.com>  
Subject: [12496] Re: Help - It's Back....! (2KHZ)  
Message-ID: <9701198563.AA856372667@smtpgw.ccgate.dl.nec.com>

Still 2khz range! The only thing I haven't tried is replacing the crystal. Any Ideas? The rest of the rig works great (the receiver is sensitive, the transmit tunes to a pretty clean signal, etc.) It just won't tune more than 2khz with the 4.7 or 5.6 inductor.  
73 de Jim (AD4KB@aol.com)

>> Hi Jim:

If you receive any info on this, please post to the group.  
I know of 3 others (and myself) who are experiencing this same problem.

I have checked the parts placement until I'm blue. Some say it could be the xtal, others say it couldn't be the xtal cuz the rig is tuning in the 10.1xx area (just no "bending"). I've now replaced everything in the front-end (except caps), but still no joy.

If you hear of any answers, I'm sure others on the list can benefit.

Thanks!

73 de Dave NR3E

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: Ed Tanton <n4xy@avana.net>  
Subject: [12510] Re: Molex connectors  
Message-ID: <3.0.1.32.19970219125439.009839b0@tiger.avana.net>

There is a threshold voltage for metal-to-metal contacts made of oxides of tin, and it is higher than 5 volts... hence the poor performance record of tin-only connections @ 5 volts or below. There are many good connectors available that have gold (or nickel) contacts available and I would advise anyone to use nothing less-again: when dealing with low current, low voltage, signal level voltages.

72/73

Ed Tanton N4XY      EMAIL: n4xy@avana.net      TEL: (770)579-3933 V/MBX/FAX  
189 Pioneer Trail  
Marietta, GA 30068-3466

QRP-ARCI#7663      G-QRP#6779      OK-QRP#172      QRP-L#758      AdvRC#140  
NORCAL#1779      NCDXF      SEDXC

Life Member: ARRL      AMSAT      IDRA      INDEXA      QCWA  
URL: Coming Sooner or Later

"Think you can, think you can't: either way you're right!" Henry Ford

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: NilsBull@aol.com  
Subject: [12445] Re: NC38s Power out adjustment?  
Message-ID: <970218201222\_-1675657101@emout11.mail.aol.com>

Probably mentioned this before, but the NC38S will run a watt or so with a VN10KM in place of the IRF510. I tried it. It worked until I burned the Q2 out by letting the TC2 position sit in a "untuned" or "scroungy output" position. Very interesting, that.

If the output is not tuned for a seriously clean signal (as side-tone or scope set), ol' Q2 on my NC38S would go completely bonkers and damn-near melt the back of the box. I think I've reported this before.

One thing that I have considered (and will probably try once I calm down again) is to use the output of Q1 in the tx chain to drive a Howes kit 30m tx board that I have kicking around here as part of a previously side-tracked project. The Howes takes a VFO signal and can be tuned for a pretty clean looking output. It is also adjustable from milliwatts to 5 watts (generally) and does get good reports. Since the Q1/2N3904 deal is really a buffer/feeder for the 74HC240 transmitter game, I figured that I'd just hose ol' Q1 up to the Howes and tune it for a nice sig -- with the help of tuning TC2 on the NC38S.

And yes, my version with an IRF510 also put out well over 5 watts. So maybe it's the IRF510s that they sell around Dayton what's giving all this fun to folks like me and Ron. Teach us a thing or two.

73  
Nils  
WB8IJN +c

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: Rick Sealey <rsealey@InfoAve.Net>  
Subject: [12452] Re: New Kit  
Message-ID: <1.5.4.32.19970219020752.009f9788@mail.infoave.net>

When I posted my opinion and observations of the NW40 superhet tranceiver kit, yesterday (or was it today?), I intentionally omitted Emtech's address and pricing. But as several have asked how to contact them, here's the scoop:

The owner is Roy Gregson, W6EMT.

EMTECH  
3641A Preble St.  
Bremerton, WA 98312

email roygregson@aol.com

website [www.isomedia.com/homes/starbuck/emtech.htm](http://www.isomedia.com/homes/starbuck/emtech.htm)

The website has a lot of information available.

Again, full disclaimer.

Best regards to all.

72,73  
Rick - KI4PZ

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: martin38945@juno.com  
Subject: [12531] Re: Phasing quads  
Message-ID: <19970219.161823.3935.1.martin38945@juno.com>

On Wed, 19 Feb 1997 12:31:08 -0800 EScott@gstworld.net (Erin Scott) writes:

>Does someone know of a good "rule of thumb" formula for the appropriate spacing >between stacked quads. Thanks in advance  
>>>Erin

>Erin KC7LEU  
>KC7LEU@N7UVH.#NID.ID.USA.NOAM  
>escott@gstworld.net

Dear Erin and Friends,

5/8 wave... basically the same for almost any horizontally polarized pair of identical (and not so identical) antennas... whether they are quads or not. You asked for a "rule of thumb"... do you know the origin of the term "rule of thumb"? Hint... it pertains to domestic violence.

There are many factors to consider and don't be discouraged if you can't manage 5/8 wave spacing.

Vy 73,

Martin W9XN QRP-L #998

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: Norm.Lee@flinders.edu.au (Norman J. Lee)  
Subject: [12450] Re: QRP-L digest 641  
Message-ID: <v01540b07af3036ac0268@[129.96.234.104]>

AB7MY is reflecting my own view on RS test gear, particularly their digital multimeters. I am told by the local RS (Tandy) workshop that in fact the multimeters are made by Fluke under contract from RS and have the RS brand names on the case. They sure are good value!

Norm  
VK5GI

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: "Gary R. Widmayer" <grwidma@edcen.ehhs.cmich.edu>  
Subject: [12538] Re: QSL help  
Message-ID: <330B912B.7335@edcen.ehhs.cmich.edu>

Paul, QSL via Francesco Valsecchi, Bitossi 21, Roma, RM 00136, Italy is the adr and don't put the ham call on the envelope, not his and not yours in the return address. IK0FVC doesn't have a state side manager.

You can try IRC's one or two, that will cost you \$2.00, or buy an Italy

stamp for \$1.35 from William J. Plum DX stamp supplies and make an SASE to yourself and mail it out to the above address.

I have had the best results with the SASE method.

Gary/N8AYY

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: Cecil A Moore <Cecil\_A\_Moore@ccm.ch.intel.com>  
Subject: [12495] Re: Radials

>From: Randy Kaufman <krandy@hubcap.clemson.edu>  
>Don Newcomb, W0DN, writes:  
>If an antenna is mounted at ground level there's no point in  
>cutting radials to any particular length cuz the earth will detune  
>them anyway. All you want to do is make the surface of the earth  
>around the antenna more conductive than it is ordinarily, and if you  
>can't copper-plate the back yard the best approach is to run out as  
>many radials as possible, each as long as possible around the antenna  
>in all directions.

Hi Randy, thanks for posting Don's statements. This is definitely true for ground mounted verticals. If one doesn't believe it, one should ask oneself the following:

When modeling, why does an infinite perfect ground plane yield the highest gain? Is an infinite perfect ground resonant?

Salt water is the best natural ground plane that we know of. Is salt water resonant? We want a conductive ground plane out as far as is feasible. There's no loss in a perfect conductor whether it is resonant or not. The purpose of radials in a ground mounted vertical is to force the RF currents to flow in a low-loss conductor, not in lossy earth.

Will 1/4 WL radials work for a 5/8 WL ground mounted vertical? Nope, the high current point is far up the antenna and the radiation from that point will tend to miss the 1/4 WL radials entirely and instead of being reflected from the radials will tend to dissipate in the ground.

73, Cecil, W6RCA, 00TC



From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: "Marcus Leatham" <leatham@nortel.ca>  
Subject: [12514] re:re 1/2 Turn:  
Message-ID: <199702191831.NAA98325@nss2.CC.Lehigh.EDU>

Sometimes you might wind a toroid backwards and it won't fit in the holes drilled in the pc board. If so, sometimes the only thing to do is take 1/2 turn off one end and put it on the other. Voila! It fits! Same principle as the Mobius Strip and the Klein Bottle. Also refer to any of several Escher space-filling prints.

Marcus KR5N

In message "re 1/2 Turn:", you write:

>I missed the original intent or purpose of the half turn thingee. Why are  
>we looking for this in the first place, since inductance can be changed to  
>a certain degree by squeezing/spreading turns.  
>  
>What I remember from some of the "ole time" builders (Doug Demaw era), is  
>that you simply count the number of turns that pass THRU the hole of the  
>toroid.  
>

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: Jim Hydzik <congress@magpage.com>  
Subject: [12483] Re: Re[2]: ZD8Z: 100,000+ miles per watt!  
Message-ID: <199702191301.IAA17456@alaska.magpage.com>

> It was also neat hearing ZD8M with a very strong echo, with maybe 0.1  
> sec delay. I also heard this effect on an east coast station in CT.  
> I assume this means I was hearing them both ways around the earth at  
> the same time!  
>  
> - Dan Tayloe, N7VE (ex-KK7BD)

Or his phone line relay in the Bahamas :) Wouldn't be the 1st time.

Been there...done that to fool some friends back in Salisbury, MD in the 80's

Jim K3QIO Delaware

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: Philip Karras <ke3fl@access.digex.net>  
Subject: [12524] RE: RS Scope Probe & RS Multimeter  
Message-ID: <Pine.SUN.3.94.970219153551.16914A-1000000@access5.digex.net>

RS Scope Probe:

I bought one of these for me, and for work.  
Yes and Yes. It works like any other digital scope. They claim 5 MHz  
& I've used to up to about 15 MHz. It will ghost up to about 25 MHz  
but then the front end fails & almost nothing comes through.

If you want to understand more about digital scopes look at the NUTS  
& VOLTS Magazine Issues December 96, page 56 and January 97 page 52  
for two good articles "How Much Scope is Enough? Part I & II.

Multimeter:

I bought one of these for me and one for work as well. They work  
great. They are the least expensive on the market at present & by far  
the cheapest chart recorder you can get!

Just saw an ad for a Protek DMM which has the normal stuff +  
frequency, Capacitance, Inductance, logic prob, ~VdB ?, clock with  
stop watch, 10 memory locations, Temperature- but no transistor  
checker, ISO9001 cert. Windows & DOS software for \$210 201-767-7242

usual disclaimers...

72 & 73 de KE3FL/Phil  
:-)

From owner-qrp-1@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: Monte Stark <ku7y@sage.dri.edu>  
Subject: [12457] Re: Slow Burn!  
Message-ID: <Pine.SUN.3.90.970218191024.5644A-1000000@vortex.sage.dri.edu>

On Tue, 18 Feb 1997, N4JS wrote:

> I am doing a slow burn. I just received my March QST. On page 24 is a  
> letter from Adam McLaughlin, KD6POC, entitled "Why QRP?"

Hi John,

Well, I might be in for some flames, but I'd have no trouble with  
publishing a well written letter from "the other side of the fence".

cul,

73, Ron,       SOWP 5545M,

.....KU7Y.....ARCI #8829.....Monte "Ron" Stark.....  
....ku7y@sage.dri.edu.....Washoe Lake, Nevada....  
....QRP-L #17...ARS #49...NorCal #330.....NRA LIFE.....

From owner-qrp-l@Lehigh.EDU Wed Feb 19 18:19:31 1997  
From: faunt@netcom.com (Doug Faunt N6TQS +1-510-655-8604)  
Subject: [12479] Re: [12384] Re: BNC and 239 Chassis Mount - Substitution?  
Message-ID: <199702190647.WAA00586@netcom14.netcom.com>

Date: Tue, 18 Feb 1997 11:06:37 -0500 (EST)  
From: JCoote@aol.com

Those plug in N, UHF and BNC thingies used on the Bird 43 wattmeter might be  
large enough... a little pricey though!

I once found a number of these on the "junk" table at a local  
electronics shop for \$1. each, and bought a bunch, not realizing what  
they were. I still have a few around here.

73, doug